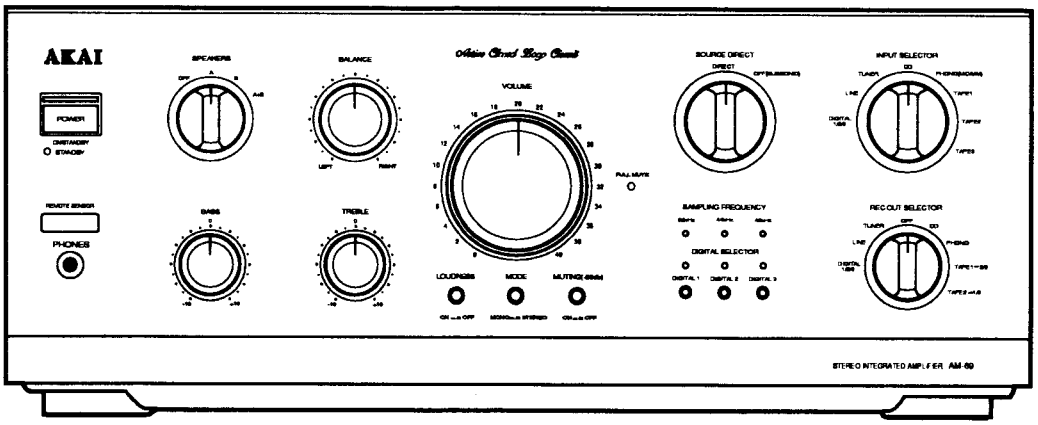
AKAI SERVICE MANUAL



MODEL AM-69

DIGITAL INTEGRATED AMPLIFIER

MODEL AM-59, 69

SPECIFICATIONS

Power output	
AM-69	220 W+220 W (DIN, 4 ohms at 1 kHz, 1%)
	110 W + 110 W (FTC, 8 ohms at 20 Hz to 20 kHz, 0.05 %)
AM-59	200W + 200 W (DIN, 4 ohms at 1 kHz, 1%)
	100 W+100 W (FTC, 8 ohms at 20 Hz to 20 kHz, 0.05 %)
Power band width	5 Hz to 60 kHz (0.1 %)
Total harmonic distortion	0.005 % (1 kHz, 8 ohms)
Frequency response	5 Hz to 100 kHz (+0 dB, −3 dB)
Tone control	
Bass	±10 dB (100 Hz)
Treble	±10 dB (10 kHz)
Input level / Impedance	
Phono (MM)	2.0 mV / 47 kohms
Phono (MC)	200 µV / 100 ohms
Tuner, CD, Tape	150 mV / 47 kohms
Maximum input level	
Phono (MM)	170 mV
Tuner, CD, Tape	9 V (at tone control flat)
Damping factor	120 (1 kHz, 8 ohms)
Residual noise	0.1 mV (IEC-A)
S/N ratio	
Phono (MM)	86 dB (IEC-A)
Phono (MC)	71 dB (IEC-A)
Tuner, CD, Tape	102 dB (IEC-A)
Audio mute	− 20dB
Full mute	− 70 dB
Channel separation	65 dB (1 kHz) / 55 dB (10 kHz)

Cross talk	
CD to Phono	90 dB (1 kHz, 500mV input level)
CD to Tuner/Tape	90 dB (1 kHz, 500mV input level)
Required speaker impedance	
A or B	4 to 16 ohms
A and B	8 to 16 ohms
Power requirements	220-230 V, 50 Hz for Europe except U.K.
Power consumption	
AM-69	400 W
AM-59	300 W
Dimensions	425 (W) X 177 (H) X 401 (D) mm
Weight	
AM-69	14.7 kg
AM-59	13.8 kg
[DIGITAL section (AM-69 only)]	
D/A converter	Interpolative one bit dual type
Digital filter	18 bit, 8 times over sampling
Sampling frequency	32 kHz / 44.1 kHz / 48 kHz
Digital input level	
Coaxial	0.5 Vp-p / 75 ohms
Optical	− 14 dBm to − 23dBm
Frequency response	5 Hz to 20 kHz (±0.3 dB)
Dynamic range	96 dB
Total harmonic distortion	0.002 %

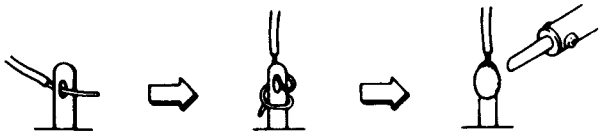
Standard accessory	
Remote control unit	x 1
Batteries for remote control	x 2
Operator's manual	x 1

* For improvement purposes, specifications and design are subject to change without notice.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples:RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords,noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphonejacks, signal-input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 μF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.
Please leave them at an appropriate depot.

★INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

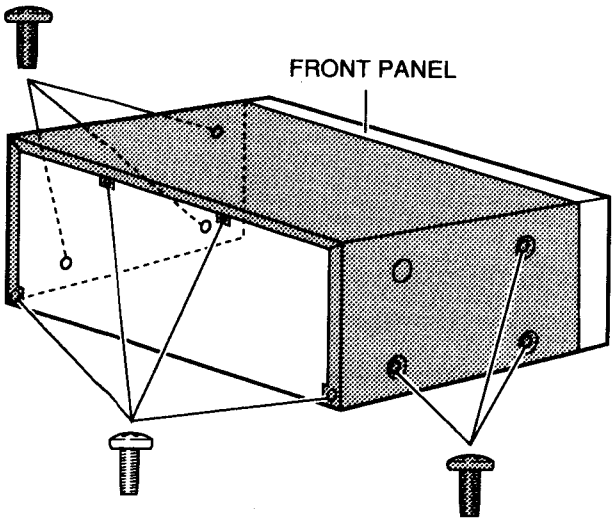
Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
A	U.S.A
B	U.K.
C	Canada
E	Europe (except UK)
J	Japan
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

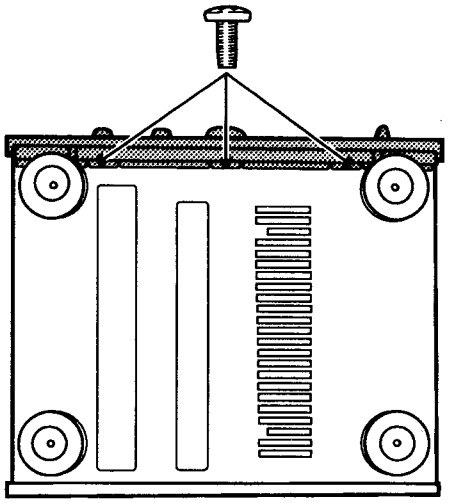
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations.
Reassemble in the reverse order.

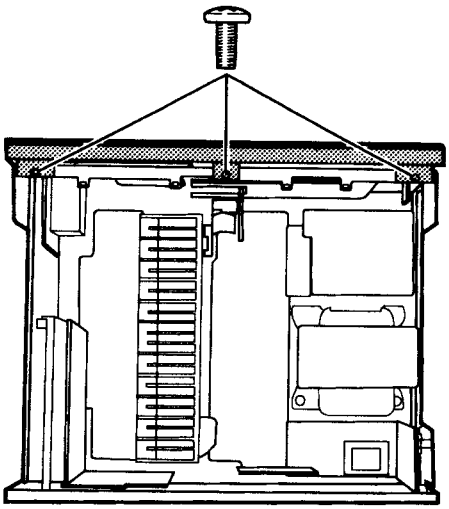
1. Removal of the UPPER COVER



2. Removal of the FRONT PANEL



Remove the eight knobs by pulling them out.



II. PRINCIPAL PARTS LOCATION

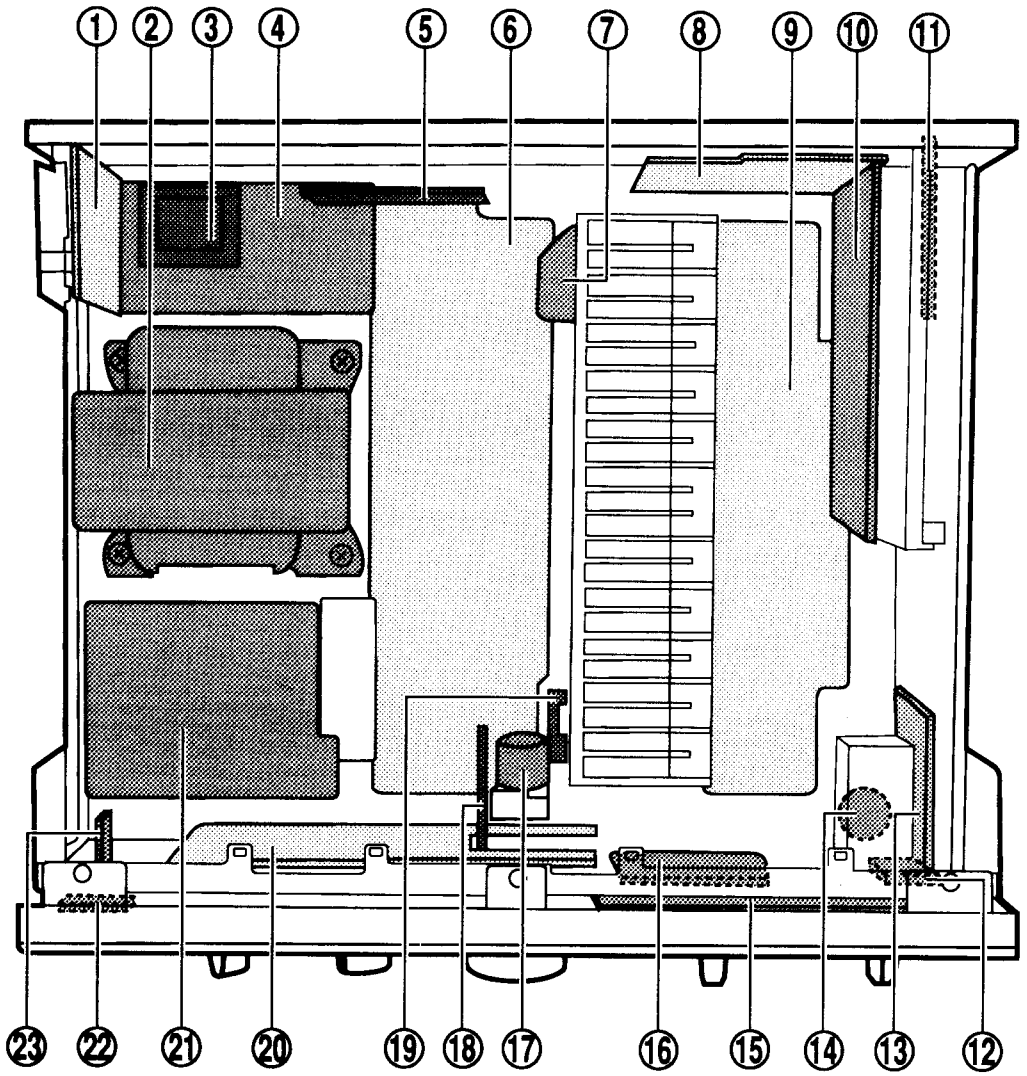


Fig.2-1

1. PRIMARY PCB
2. POWER TRANSFORMER
3. SUB TRANSFORMER
4. SUB TRANS PCB
5. SP TERMINAL PCB
6. I - AMP PCB
7. THERMO (L) PCB
8. INPUT PCB
9. V - AMP PCB
10. REC SELECTOR PCB
11. DAC PCB (AM-69 only)
12. REC OUT SW PCB
13. INPUT SW PCB
14. INPUT SW MOTOR
15. SYSCON PCB
16. SOURCE DIRECT SW PCB
17. VOLUME MOTOR
18. VOLUME PCB
19. THERMO (R) PCB
20. TONE PCB
21. POWER SUPPLY PCB
22. POWER SW PCB
23. PHONES JACK PCB

III. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A) [S] :SAA (Australia)
[B] :BEAB (England) [U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe) [V] :VDE (Germany)
[J] :JPN (Japan) [Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AX-415115M	REMOCON RC-S59
2	AX-415116M	REMOCON RC-S69
3	*BT-415037M	TRANS POW A1030S-EV
4	*BT-415117M1	TRANS POW A2077 EV [AM-59][T1]
5	*BT-415118M1	TRANS POW A2078 EV [AM-69][T1]
6	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC
7	EC-381263J	C EC V SNP 103M 63.0DC
8	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
9	ED-415085J	D LED SLR-33VC3F RED
10	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
11	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
12	ED-348990	D SILICON H DS446
13	ED-301911	D SILICON H DS448
14	ED-344280	D SILICON H GMA-01-FY2 F05
15	ED-307572	D SILICON H 1SS131
16	ED-624903	D SILICON H 1S2473
17	*ED-384278J	D SILICON RBV602 200/6.0A
18	*ED-511907	D SILICON 1N4002 100/1.0A
19	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
20	*ED-370990	D SILICON 1SR35-100A HS F10
21	*ED-346557	D ZENER H HZ12A3L
22	*ED-330218	D ZENER H HZ15-2L
23	*ED-346567	D ZENER H HZ16-1L
24	ED-346570	D ZENER H HZ18-3L
25	*ED-330219	D ZENER H HZ20-2L
26	*ED-377933	D ZENER H HZ27-3LFA F10
27	*ED-343854	D ZENER H HZ30-2L
28	*ED-343410	D ZENER H HZ6A1L [AM-69]
29	*ED-346525	D ZENER H HZ6A3L
30	ED-346530	D ZENER H HZ6C3L
31	*EF-415131J	FUSE S504 T 250V 315MA
32	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
33	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]
34	*EF-405403J	FUSE S506 T 250V 5.00A
35	EI-330352	IC BA6109
36	EI-416800J	IC LC66404A-4B67 A2075-1
37	EI-403530J	IC LC7822N
38	EI-393323J	IC M5218AL-771
39	EI-393326J	IC M5218AP-721
40	EI-348785	IC M5220L
41	EI-360043	IC M5220P
42	*EI-362587J1	IC M5238AL
43	EI-412415J	IC PCM69AP-J
44	EI-390063J	IC PD0037
45	EI-403437J	IC SM5840AP
46	EI-360040J1	IC TC74HCU04AP
47	EI-354080	IC UPC1237H
48	EI-382875J	OSC CE CST4.00MGW 4MHZ
49	EJ-394459J	SOCKET OPTICAL GP1F32R
50	EJ-394490J	SOCKET OPTICAL GP1F32T
51	EJ-415134J	SW SLIDE SSSU04 2-04-02S
52	*EQ-415055J	RELAY POW VS-6MB 1NO 6V
53	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
54	EQ-400957J	RELAY SIG RY12W-OH-K 2TR 12V
55	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
56	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
57	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
58	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
59	ES-415120J	SW PUSH SPEC31 3THROW *
60	ES-415100J	SW ROTARY SRBV14 01-04N
61	ES-415126J	SW ROTARY SRBV17 01-07N [AM-59]
62	ES-415138J	SW ROTARY SRBV18 01-08N [AM-69]
63	ES-415099J	SW ROTARY SRBV22 02-02N
64	ES-415137J	SW SPE.ROTARY SRBAA48 02-08N [AM-69]
65	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
66	ET-403432J	DETECTOR SPS-420-1
67	ET-356336	TR DTA114ES
68	ET-369248	TR DTA114YS
69	ET-415140J	TR DTA115TS T05 [AM-69]
70	ET-354415	TR DTA144ES [AM-69]
71	ET-353897	TR DTC114ES
72	ET-354365	TR DTC114YS
73	ET-354414	TR DTC144ES [AM-69]
74	ET-322353	TR FET 2SK117 Y
75	ET-360749	TR FET 2SK170 BL
76	ET-337759	TR FET 2SK246 GR [AM-69]
77	*ET-415051J	TR 2SA1186 P,Y LF118
78	ET-338244	TR 2SA1207 R,S
79	ET-368048	TR 2SA1208 S
80	*ET-345626	TR 2SA1248 S,T [AM-69]
81	ET-353899	TR 2SA1317 S,T,U
82	*ET-352726	TR 2SA1392 T,U [AM-69]
83	*ET-403527J	TR 2SA1507 S,T [AM-69]
84	*ET-415158J	TR 2SA1837
85	*ET-349705	TR 2SC2320 E,F,G
86	*ET-415053J	TR 2SC2837 P,Y LF118
87	*ET-348830	TR 2SC2909 S,T
88	ET-368047	TR 2SC2910 S
89	*ET-345625	TR 2SC3116 S,T [AM-69]
90	ET-397160J	TR 2SC3330 R,S,T,U,V
91	ET-378524J	TR 2SC3383 S,T,U
92	ET-394735J	TR 2SC3792 T05
93	*ET-403526J	TR 2SC3902 S,T
94	*ET-415156J	TR 2SC4793
95	*ET-376880	TR 2SD1266 P
96	EV-415136J	SW.SPE.ROTARY SRBAA47 02-07N [AM-59]
97	EV-401270J	VR ROTARY RK16312 B103X2
98	EV-416950J	VR ROTARY RK1631220 SPL W104 UP
99	EV-415032M	VR SPL EUWM HD003 B15 B104X2 [AM-59]
100	EV-415139J	VR SPL RK18112MC B104X2 [AM-69]

2. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1-A	BA-A2077T020A	ML PC (#) MAIN AMP BLK AM-59/ML
1-B	BA-A2077T020B	ML PC (#) MAIN AMP BLK AM-69/ML
2-A	BA-A2077T030A	ML PC (#) PREAMP BLK AM-59/ML
2-B	BA-A2077T030B	ML PC (#) PREAMP BLK AM-69/ML
3-A	BA-A2077T040A	ML PC (#) SYSCON BLK AM-59/ML
3-B	BA-A2077T040B	ML PC (#) SYSCON BLK AM-69/ML
4	BA-A2078T050A	ML PC DAC BLK AM-69/ML [AM-69]

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARDS.
- V-AMP P.C BOARD
- I-AMP P.C BOARD
- POWER SUPPLY P.C BOARD
- SP TERMINAL P.C BOARD
- PHONES JACK P.C BOARD
- THERMO (L) P.C BOARD
- THERMO (R) P.C BOARD

PC (#) PRE AMP BLK CONSISTS OF FOLLOWING P.C BOARDS.
- INPUT P.C BOARD
- REC SELECTOR P.C BOARD
- INPUT SW P.C BOARD
- SOURCE DIRECT SW P.C BOARD
- TONE P.C BOARD
- REC OUT SW P.C BOARD
- VOLUME P.C BOARD
- PRIMARY P.C BOARD
- SUB TRANS P.C BOARD

PC (#) SYSCON BLK CONSISTS OF FOLLOWING P.C BOARDS.
- SYSCON P.C BOARD
- POWER SW P.C BOARD

3. V-AMP P.C BOARD

Ref. No.	Part No.	Description
D1	ED-301911	D SILICON H DS448
D2	ED-301911	D SILICON H DS448
D3	*ED-346567	D ZENER H HZ16-1L
D4	*ED-346567	D ZENER H HZ16-1L
D7	*ED-343854	D ZENER H HZ30-2L
D8	*ED-343854	D ZENER H HZ30-2L
D9	*ED-343854	D ZENER H HZ30-2L
D10	*ED-343854	D ZENER H HZ30-2L
D51	ED-301911	D SILICON H DS448
D52	ED-301911	D SILICON H DS448
D53	*ED-346567	D ZENER H HZ16-1L
D54	*ED-346567	D ZENER H HZ16-1L
IC1	EI-393326J	IC M5218AP-721
R10	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R13	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R16	*ER-378517J	R OMF H S15 FS 2W 681J
R21	*ER-378517J	R OMF H S15 FS 2W 681J
R60	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R63	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R66	*ER-378517J	R OMF H S15 FS 2W 681J
R71	*ER-378517J	R OMF H S15 FS 2W 681J
TR1	ET-322353	TR FET 2SK117 Y
TR2	ET-368047	TR 2SC2910 S
TR3	ET-368048	TR 2SA1208 S
TR4	*ET-368048	TR 2SA1208 S
TR5	*ET-368048	TR 2SA1208 S
TR6	*ET-368047	TR 2SC2910 S
TR7	*ET-368047	TR 2SC2910 S
TR8	*ET-368047	TR 2SC2910 S
TR10	*ET-368048	TR 2SA1208 S
TR51	ET-322353	TR FET 2SK117 Y
TR52	ET-368047	TR 2SC2910 S
TR53	ET-368048	TR 2SA1208 S
TR54	*ET-368048	TR 2SA1208 S
TR55	*ET-368048	TR 2SA1208 S
TR56	*ET-368047	TR 2SC2910 S
TR57	*ET-368047	TR 2SC2910 S
TR58	*ET-368047	TR 2SC2910 S
TR60	*ET-368048	TR 2SA1208 S

4. I-AMP P.C BOARD

Ref. No.	Part No.	Description
C101	EC-381263J	C EC V SNP 103M 63.0DC
C102	EC-381263J	C EC V SNP 103M 63.0DC
D101	*ED-384278J	D SILICON RBV602 200/6.0A
D102	*ED-384278J	D SILICON RBV602 200/6.0A [AM-69]
D105	ED-348990	D SILICON H DS446
D106	ED-348990	D SILICON H DS446
D107	ED-348990	D SILICON H DS446
D108	ED-348990	D SILICON H DS446
D109	ED-348990	D SILICON H DS446
D110	ED-346570	D ZENER H HZ18-3L
D111	ED-346570	D ZENER H HZ18-3L
D112	ED-346570	D ZENER H HZ18-3L
D114	ED-346567	D ZENER H HZ16-1L
D120	ED-307572	D SILICON H 1SS131
D121	ED-307572	D SILICON H 1SS131
D122	ED-307572	D SILICON H 1SS131
D155	ED-348990	D SILICON H DS446
D156	ED-348990	D SILICON H DS446
D181	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
D182	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
FR101	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR102	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR107	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR108	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR151	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR152	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR157	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR158	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
IC101	EI-354080	IC UPC1237H
L101	EO-332116	COIL FIX 2 103AK-006A 2R2K
L151	EO-332116	COIL FIX 2 103AK-006A 2R2K
R103	*ER-324186	R CB H S10 FS RDS 1/4W 681J
R105	*ER-355214	R OMF H S15 FS 2W 151J
R109	ER-381265J	R OMF H S20 FS 3W 561J
R110	ER-383007J	R OMF H S12 FS 1W 1R0J
R111	ER-383007J	R OMF H S12 FS 1W 1R0J
R112	ER-383007J	R OMF H S12 FS 1W 1R0J
R113	ER-383007J	R OMF H S12 FS 1W 1R0J
R114	*ER-368226	R CT P R33+R33 5W
R115	*ER-368226	R CT P R33+R33 5W
R116	ER-400150J	R OMF H S20 FS 3W 4R7J
R117	ER-381266J	R OMF H S20 FS 3W 100J
R153	*ER-324186	R CB H S10 FS RDS 1/4W 681J
R155	*ER-355214	R OMF H S15 FS 2W 151J
R159	ER-381265J	R OMF H S20 FS 3W 561J
R160	ER-383007J	R OMF H S12 FS 1W 1R0J
R161	ER-383007J	R OMF H S12 FS 1W 1R0J
R162	ER-383007J	R OMF H S12 FS 1W 1R0J
R163	ER-383007J	R OMF H S12 FS 1W 1R0J
R164	*ER-368226	R CT P R33+R33 5W
R165	*ER-368226	R CT P R33+R33 5W
R166	ER-400150J	R OMF H S20 FS 3W 4R7J
R167	ER-381266J	R OMF H S20 FS 3W 100J
R181	*ER-418459J	R MF H T73 MK4 1W 220J
RL101	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
RL102	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
RL103	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
TR101	ET-368047	TR 2SC2910 S
TR102	*ET-368047	TR 2SC2910 S
TR103	*ET-368048	TR 2SA1208 S
TR108	*ET-415053J	TR 2SC2837 P,Y LF118
TR109	*ET-415053J	TR 2SC2837 P,Y LF118
TR110	*ET-415051J	TR 2SA1186 P,Y LF118
TR111	*ET-415051J	TR 2SA1186 P,Y LF118
TR112	ET-378524J	TR 2SC3383 S,T,U
TR113	ET-368048	TR 2SA1208 S
TR116	ET-378524J	TR 2SC3383 S,T,U
TR117	ET-378524J	TR 2SC3383 S,T,U
TR118	ET-378524J	TR 2SC3383 S,T,U
TR119	ET-378524J	TR 2SC3383 S,T,U
TR151	ET-368047	TR 2SC2910 S
TR152	*ET-368047	TR 2SC2910 S
TR153	*ET-368048	TR 2SA1208 S
TR158	*ET-415053J	TR 2SC2837 P,Y LF118
TR159	*ET-415053J	TR 2SC2837 P,Y LF118
TR160	*ET-415051J	TR 2SA1186 P,Y LF118
TR161	*ET-415051J	TR 2SA1186 P,Y LF118
TR162	ET-378524J	TR 2SC3383 S,T,U

5. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
D201	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D202	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D203	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D204	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D205	*ED-377933	D ZENER H HZ27-3LFA F10
D206	*ED-377933	D ZENER H HZ27-3LFA F10
D207	*ED-377933	D ZENER H HZ27-3LFA F10
D208	*ED-377933	D ZENER H HZ27-3LFA F10
D209	*ED-370990	D SILICON 1SR35-100A HS F10
D210	*ED-370990	D SILICON 1SR35-100A HS F10
D211	*ED-346557	D ZENER H HZ12A3L
D213	*ED-343410	D ZENER H HZ6A1L [AM-69]
D214	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D215	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D216	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D217	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D218	*ED-346567	D ZENER H HZ16-1L [AM-69]
D219	*ED-346567	D ZENER H HZ16-1L [AM-69]
FR221	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
FR222	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
R201	*ER-415149J	R CB V T05 FLR 25FVJ 1/4W 151J
R202	*ER-415149J	R CB V T05 FLR 25FVJ 1/4W 151J
R208	*ER-415143J	R CB V T05 FLR 25FVJ 1/4W 2R2J
R212	*ER-415150J	R CB V T05 FLR 25FVJ 1/4W 4R7J [AM-69]
R223	*ER-704153	R OMF 1W 390J [AM-69]
TR201	*ET-368048	TR 2SA1208 S
TR202	*ET-368048	TR 2SA1208 S
TR203	*ET-368047	TR 2SC2910 S
TR204	*ET-368047	TR 2SC2910 S
TR205	*ET-415156J	TR 2SC4793
TR206	*ET-415158J	TR 2SA1837
TR207	*ET-376880	TR 2SD1266 P
TR211	*ET-352726	TR 2SA1392 T,U [AM-69]
TR212	*ET-403527J	TR 2SA1507 S,T [AM-69]
TR213	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR214	ET-352726	TR 2SA1392 T,U [AM-69]
TR215	*ET-352726	TR 2SA1392 T,U [AM-69]
TR216	ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR217	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR218	*ET-345625	TR 2SC3116 S,T [AM-69]
TR219	*ET-345626	TR 2SA1248 S,T [AM-69]
TR220	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
F2	*EF-415131J	FUSE S504 T 250V 315MA
F3	*EF-415131J	FUSE S504 T 250V 315MA
F4-A	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
F4-B	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]
F5-A	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
F5-B	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]

6. SP TERMINAL P.C BOARD

Ref. No.	Part No.	Description
TM301	EJ-342935	TERMINAL W/SCREW YKD31-0132P8P

7. PHONES JACK P.C BOARD

Ref. No.	Part No.	Description
J601	EJ-391132J	PHONE J 3P YKB24-5162 GP 6.3

8. THERMO (L) P.C BOARD

Ref. No.	Part No.	Description
TR104	*ET-378524J	TR 2SC3383 S,T,U
TR105	*ET-352726	TR 2SA1392 T,U
TR106	*ET-403526J	TR 2SC3902 S,T
TR107	*ET-403527J	TR 2SA1507 S,T

9. THERMO (R) P.C BOARD

Ref. No.	Part No.	Description
TR154	*ET-378524J	TR 2SC3383 S,T,U
TR155	*ET-352726	TR 2SA1392 T,U
TR156	*ET-403526J	TR 2SC3902 S,T
TR157	*ET-403527J	TR 2SA1507 S,T

10. INPUT P.C BOARD

Ref. No.	Part No.	Description
IC1	EI-360043	IC M5220P
J1	EJ-364546	PIN J YKC21-0070A P 2P
J2	EJ-390102J	PIN J YKC21-0045A 6P
J3	EJ-415133J	PIN J YKC21-0071A 4P
J5	EJ-415133J	PIN J YKC21-0071A 4P
J6	EJ-415133J	PIN J YKC21-0071A 4P
L1	EO-418469J	COIL FIX 3 ZJY51R5-2PB
L51	EO-418469J	COIL FIX 3 ZJY51R5-2PB
SW1	EJ-415134J	SW SLIDE SSSU04 2-04-02S
TR1	ET-360749	TR FET 2SK170 BL
TR2	ET-360749	TR FET 2SK170 BL
TR51	ET-360749	TR FET 2SK170 BL
TR52	ET-360749	TR FET 2SK170 BL

11. REC SELECTOR P.C BOARD

Ref. No.	Part No.	Description
D101	ED-301911	D SILICON H DS448 [AM-69]
D151	ED-301911	D SILICON H DS448 [AM-69]
D181	*ED-330219	D ZENER H HZ20-2L
D182	*ED-330219	D ZENER H HZ20-2L
D183	*ED-346567	D ZENER H HZ16-1L
D184	*ED-346567	D ZENER H HZ16-1L
D185	ED-301911	D SILICON H DS448
D186	ED-301911	D SILICON H DS448
D187	*ED-330219	D ZENER H HZ20-2L [AM-69]
D188	*ED-330219	D ZENER H HZ20-2L [AM-69]
IC101	EI-403530J	IC LC7822N
TR101	ET-394735J	TR 2SC3792 T05
TR102	ET-394735J	TR 2SC3792 T05
TR103	ET-394735J	TR 2SC3792 T05
TR104	ET-394735J	TR 2SC3792 T05
TR105	ET-394735J	TR 2SC3792 T05
TR106	ET-337759	TR FET 2SK246 GR [AM-69]
TR107	ET-337759	TR FET 2SK246 GR [AM-69]
TR108	ET-394735J	TR 2SC3792 T05 [AM-69]
TR151	ET-394735J	TR 2SC3792 T05
TR152	ET-394735J	TR 2SC3792 T05
TR153	ET-394735J	TR 2SC3792 T05
TR154	ET-394735J	TR 2SC3792 T05
TR155	ET-394735J	TR 2SC3792 T05
TR156	ET-337759	TR FET 2SK246 GR [AM-69]
TR157	ET-337759	TR FET 2SK246 GR [AM-69]
TR158	ET-394735J	TR 2SC3792 T05 [AM-69]
TR181	ET-354414	TR DTC144ES [AM-69]
TR182	ET-354415	TR DTA144ES [AM-69]
TR183	ET-415140J	TR DTA115TS T05 [AM-69]
TR184	ET-354414	TR DTC144ES [AM-69]

12. INPUT SW P.C BOARD

Ref. No.	Part No.	Description
D201	ED-346530	D ZENER H HZ6C3L
FR201	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
IC201	EI-330352	IC BA6109
SW201-A	EV-415136J	SW.SPE.ROTARY SRBAA47 02-07N [AM-59]
SW201-B	ES-415137J	SW SPE.ROTARY SRBAA48 02-08N [AM-69]

13. SOURCE DIRECT SW P.C BOARD

Ref. No.	Part No.	Description
SW250	ES-415099J	SW ROTARY SRBV22 02-02N

14. TONE P.C BOARD

Ref. No.	Part No.	Description
D301	*ED-330218	D ZENER H HZ15-2L
D302	*ED-330219	D ZENER H HZ20-2L
D303	*ED-330219	D ZENER H HZ20-2L
D304	ED-330218	D ZENER H HZ15-2L
D305	*ED-330219	D ZENER H HZ20-2L
D306	*ED-330219	D ZENER H HZ20-2L
D307	ED-624903	D SILICON H 1S2473
D308	ED-624903	D SILICON H 1S2473
D309	ED-624903	D SILICON H 1S2473
IC301	EI-393323J	IC M5218AL-771
IC302	EI-348785	IC M5220L
RL301	EQ-400957J	RELAY SIG RY12W-OH-K 2TR 12V
SW301	ES-415120J	SW PUSH SPEC31 3THROW *
SW302	ES-415100J	SW ROTARY SRBV14 01-04N
TR301	ET-338244	TR 2SA1207 R,S
TR302	*ET-338244	TR 2SA1207 R,S
TR303	*ET-348830	TR 2SC2909 S,T
TR304	*ET-348830	TR 2SC2909 S,T
TR305	ET-348830	TR 2SC2909 S,T
TR306	*ET-348830	TR 2SC2909 S,T
TR307	*ET-338244	TR 2SA1207 R,S
TR308	*ET-338244	TR 2SA1207 R,S
TR309	ET-397160J	TR 2SC3330 R,S,T,U,V
TR310	ET-397160J	TR 2SC3330 R,S,T,U,V
VR301	EV-401270J	VR ROTARY RK16312 B103X2
VR302	EV-401270J	VR ROTARY RK16312 B103X2
VR303	EV-416950J	VR ROTARY RK1631220 SPL W104 UP

15. REC OUT SW P.C BOARD

Ref. No.	Part No.	Description
SW401-A	ES-415126J	SW ROTARY SRBV17 01-07N [AM-59]
SW401-B	ES-415138J	SW ROTARY SRBV18 01-08N [AM-69]

16. VOLUME P.C BOARD

Ref. No.	Part No.	Description
D501	ED-301911	D SILICON H DS448
TR501	ET-353899	TR 2SA1317 S,T,U
TR502	ET-397160J	TR 2SC3330 R,S,T,U,V
TR503	ET-353899	TR 2SA1317 S,T,U
TR504	ET-397160J	TR 2SC3330 R,S,T,U,V
VR501-A	EV-415032M	VR SPL EUWM HD003 B15 B104X2 [AM-59]
VR501-B	EV-415139J	VR SPL RK18112MC B104X2 [AM-69]

17. PRIMARY P.C BOARD

Ref. No.	Part No.	Description
J601	EJ-415050J	SOCKET OUT M1882 3P
L601	*EO-332116	COIL FIX 2 103AK-006A 2R2K
L602	*EO-332116	COIL FIX 2 103AK-006A 2R2K
F1	*EF-405403J	FUSE S506 T 250V 5.00A

18. SUB TRANS P.C BOARD

Ref. No.	Part No.	Description
C701	*EC-389414J	C CE V DE7090 B102K 400AC
D701	*ED-511907	D SILICON 1N4002 100/1.0A
D702	*ED-511907	D SILICON 1N4002 100/1.0A
D703	*ED-511907	D SILICON 1N4002 100/1.0A
D704	*ED-511907	D SILICON 1N4002 100/1.0A
D705	ED-301911	D SILICON H DS448
D706	ED-301911	D SILICON H DS448
D707	ED-624903	D SILICON H 1S2473
D709	*ED-346530	D ZENER H HZ6C3L
RL701	*EQ-415055J	RELAY POW VS-6MB 1NO 6V
T701	*BT-415037M	TRANS POW A1030S-EV
TR701	*ET-376880	TR 2SD1266 P
TR702	ET-352726	TR 2SA1392 T,U
TR703	ET-378524J	TR 2SC3383 S,T,U
TR704	ET-378524J	TR 2SC3383 S,T,U

19. SYSCON P.C BOARD

Ref. No.	Part No.	Description
C802	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC
D801	ED-301911	D SILICON H DS448
D802	ED-301911	D SILICON H DS448
D803	ED-307572	D SILICON H 1SS131
D804	ED-415085J	D LED SLR-33VC3F RED
D805	ED-624903	D SILICON H 1S2473 [AM-69]
D806	ED-624903	D SILICON H 1S2473 [AM-69]
D807	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D808	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D809	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D810	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
D811	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
D812	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
IC801	EI-416800J	IC LC66404A-4B67 A2075-1
TR801	ET-353897	TR DTC114ES
TR802	ET-354365	TR DTC114YS
TR803	ET-369248	TR DTA114YS
TR804	ET-397160J	TR 2SC3330 R,S,T,U,V
TR805	ET-353899	TR 2SA1317 S,T,U [AM-69]
TR806	ET-354414	TR DTC144ES [AM-69]
TS801	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
TS802	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
TS803	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
X801	EI-382875J	OSC CE CST4.00MGW 4MHZ

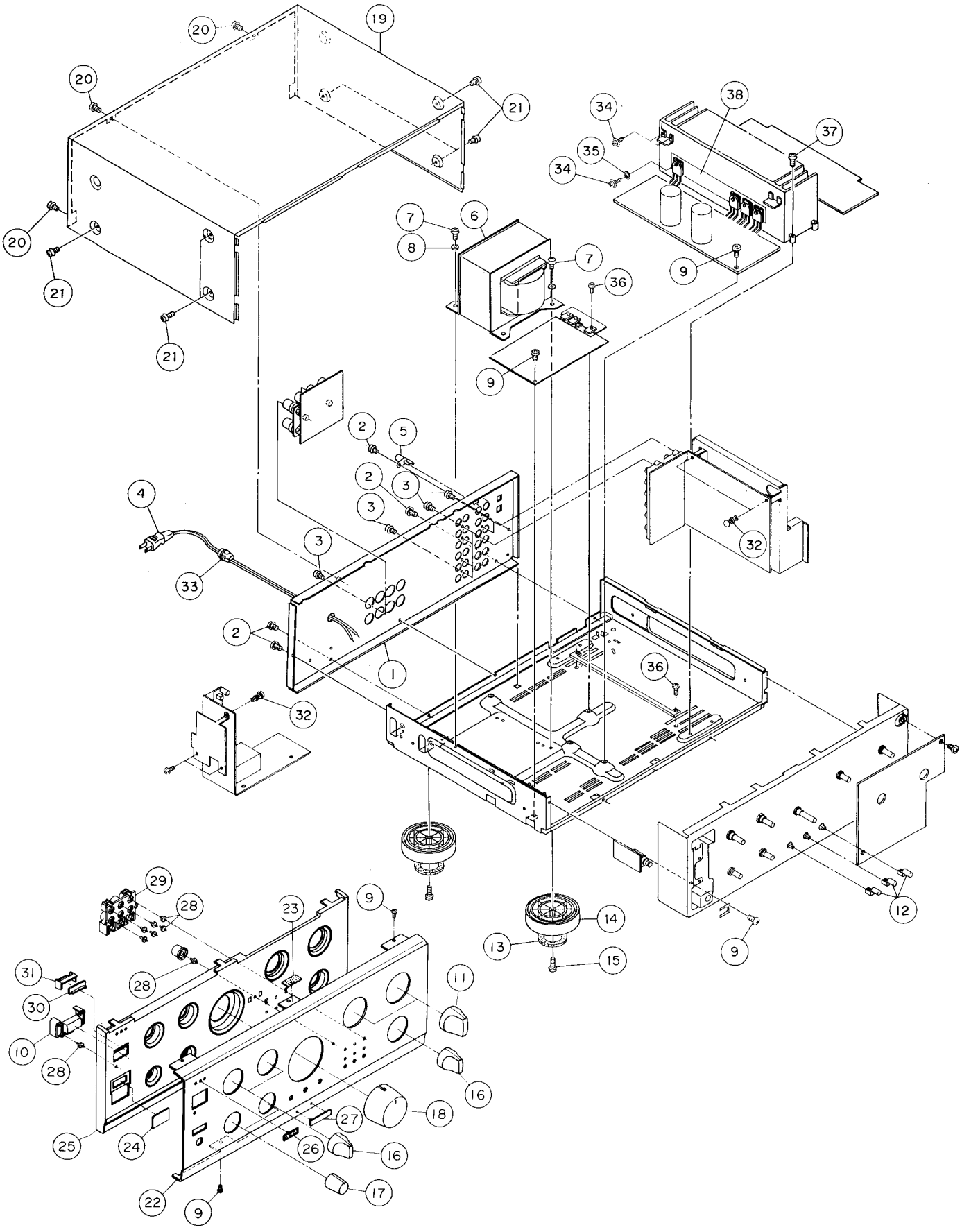
20. POWER SW P.C BOARD

Ref. No.	Part No.	Description
D851	ED-415085J	D LED SLR-33VC3F RED
D852	ED-403987J	D LED SLR33MC3F GREEN
D853	ED-403987J	D LED SLR33MC3F GREEN
PH851	ET-403432J	DETECTOR SPS-420-1
ST851	ES-394427J	SW TACT SOR-133HS T05

21. DAC P.C BOARD

Ref. No.	Part No.	Description
D1	ED-344280	D SILICON H GMA-01-FY2 F05
D2	ED-344280	D SILICON H GMA-01-FY2 F05
D3	ED-344280	D SILICON H GMA-01-FY2 F05
D4	*ED-346525	D ZENER H HZ6A3L
D5	*ED-346525	D ZENER H HZ6A3L
D6	*ED-343410	D ZENER H HZ6A1L
D7	ED-344280	D SILICON H GMA-01-FY2 F05
FL1	EH-385978J	FILTER EMI EXC-ELSR35T T05
FL2	EH-385788J	FILTER EMI EXC-ELSA35
IC1	EI-360040J1	IC TC74HCU04AP
IC2	EI-390063J	IC PD0037
IC3	EI-403437J	IC SM5840AP
IC4	EI-412415J	IC PCM69AP-J
IC5	*EI-362587J1	IC M5238AL
IC6	*EI-362587J1	IC M5238AL
J3	EJ-390086J	PIN J T6180-BAAA ORANGE 2P
J4	EJ-394490J	SOCKET OPTICAL GP1F32T
J5	EJ-394459J	SOCKET OPTICAL GP1F32R
L1	EO-403342J	COIL FIX 1 LAP02 F05 4R7K
TR1	ET-353897	TR DTC114ES
TR2	ET-354414	TR DTC144ES
TR3	ET-353897	TR DTC114ES
TR4	*ET-349705	TR 2SC2320 E,F,G
TR5	*ET-349705	TR 2SC2320 E,F,G
TR7	ET-354414	TR DTC144ES
TR8	ET-356336	TR DTA114ES

FINAL ASSEMBLY BLOCK



22. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1-A	SP-415341M1	PANEL REAR AM-59 (E) (SG)
1-B	SP-415365M1	PANEL REAR AM-69 (E) (SG)
2	ZS-385394J	ST BID30X06STL COP E.LOK C.PK4
3	ZS-394412J	BT BID30X08STL BZN PROJECTION
4	*EW-408724M	AC CORD200 SE1H03VVH2F VHR3N E
5	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
6-A	*BT-415117M1	TRANS POW A2077 EV [AM-59][T1]
6-B	*BT-415118M1	TRANS POW A2078 EV [AM-69][T1]
7	ZS-346742	ST BID40X08STL CMT CUP
8	ZW-410640J	SW40STL CMT
9	ZS-358936	ST BID30X06STL CMT
10	SB-415182M	BUTTON POWER (SG)
11	SK-415338M	KNOB SELECTOR (SG)
12	SK-402898J	BUTTON PUSH-B
13	SZ-407213J	FELT
14	SA-384105J	FOOT ROUND SHAPED (N)
15	ZS-304021	ST BID40X12STL CMT
16	SK-415178M	KNOB SELECTOR (SG)
17	SK-415180M	KNOB TONE (SG)
18	SK-415349J	KNOB VOLUME PART
19	SP-415469M1	COVER UPPER (1) (SG)
20	ZS-389964J	ST BID30X08STL COP E.LOK C.PK4
21	ZS-404225J	ST BID40X08STL BZN
22-A	SP-415336J	PANEL FRONT AM-59
22-B	SP-415356J	PANEL FRONT AM-69
23	ZW-381273J	SPACER
24	SE-415347M	FILTER REMOCON (SG)
25	SE-415340M	ESCUTCHEON FRONT (SG)
26	SM-365756C	NAME PLATE AKAI (2)
27	SM-368416B	NAME PLATE DIGITAL (1) B [AM-69]
28	SE-410963M	LENS LED (SG)
29	SB-415339J	BUTTON DIGITAL [AM-69]
30	SE-373237J1	LENS POW
31	SE-373256	CASE LED
32	ZW-698308	RV NYL30X055 BL
33	EZ-371605	BUSH CORD 2271
34	ZS-389961J	BT BID30X14STL COP CLEAR CUP
35	ZW-403334	SW30STL CMT
36	ZS-361450	ST BID30X10STL CMT
37	ZS-371016	ST BID30X14STL CMT
38	EZ-403425J	INSULATOR A *A2069

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

23. ACCESSARY

Ref. No.	Part No.	Description
1-A	AX-415115M	REMOCON RC-S59
1-B	AX-415116M	REMOCON RC-S69

INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
AX415115M	23-1-A	ED348990	4-D105	EJ342935	6-TM301	ER704153	5-R223
AX415116M	23-1-B	ED348990	4-D106	EJ364546	10-J1	ES394427J	19-TS801
BAA2077T020A	2-1-A	ED348990	4-D107	EJ390086J	21-J3	ES394427J	19-TS802
BAA2077T020B	2-1-B	ED348990	4-D108	EJ390102J	10-J2	ES394427J	19-TS803
BAA2077T030A	2-2-A	ED348990	4-D109	EJ391132J	7-J601	ES394427J	20-ST851
BAA2077T030B	2-2-B	ED348990	4-D155	EJ394459J	21-J5	ES415099J	13-SW250
BAA2077T040A	2-3-A	ED348990	4-D156	EJ394490J	21-J4	ES415100J	14-SW302
BAA2077T040B	2-3-B	ED370990	5-D209	EJ415050J	17-J601	ES415120J	14-SW301
BAA2078T050A	2-4	ED370990	5-D210	EJ415133J	10-J3	ES415126J	15-SW401-A
BT415037M	18-T701	ED370990	5-D214	EJ415133J	10-J5	ES415137J	12-SW201-B
BT415117M1	22-6-A	ED370990	5-D215	EJ415133J	10-J6	ES415138J	15-SW401-B
BT415118M1	22-6-B	ED370990	5-D216	EJ415134J	10-SW1	ET322353	3-TR1
EC368118	19-C802	ED370990	5-D217	EO332116	4-L101	ET322353	3-TR51
EC381263J	4-C101	ED377933	5-D205	EO332116	4-L151	ET337759	11-TR106
EC381263J	4-C102	ED377933	5-D206	EO332116	17-L601	ET337759	11-TR107
EC389414J	18-C701	ED377933	5-D207	EO332116	17-L602	ET337759	11-TR156
ED301911	3-D1	ED377933	5-D208	EO403342J	21-L1	ET337759	11-TR157
ED301911	3-D2	ED379981J	5-D201	EO418469J	10-L1	ET338244	14-TR301
ED301911	3-D51	ED379981J	5-D202	EO418469J	10-L51	ET338244	14-TR302
ED301911	3-D52	ED379981J	5-D203	EQ400957J	14-RL301	ET338244	14-TR307
ED301911	11-D101	ED379981J	5-D204	EQ403529J1	4-RL101	ET338244	14-TR308
ED301911	11-D151	ED384278J	4-D101	EQ403529J1	4-RL102	ET345625	5-TR218
ED301911	11-D185	ED384278J	4-D102	EQ403529J1	4-RL103	ET345626	5-TR219
ED301911	11-D186	ED392651J	4-D181	EQ415055J	18-RL701	ET348830	14-TR303
ED301911	16-D501	ED392651J	4-D182	ER318248	4-FR101	ET348830	14-TR304
ED301911	18-D705	ED403987J	19-D807	ER318248	4-FR102	ET348830	14-TR305
ED301911	18-D706	ED403987J	19-D808	ER318248	4-FR151	ET348830	14-TR306
ED301911	19-D801	ED403987J	19-D809	ER318248	4-FR152	ET349705	21-TR4
ED301911	19-D802	ED403987J	20-D852	ER320528	5-FR221	ET349705	21-TR5
ED307572	4-D120	ED403987J	20-D853	ER320528	5-FR222	ET352726	5-TR211
ED307572	4-D121	ED405359J	19-D810	ER324186	4-R103	ET352726	5-TR214
ED307572	4-D122	ED405359J	19-D811	ER324186	4-R153	ET352726	5-TR215
ED307572	19-D803	ED405359J	19-D812	ER341493	4-FR107	ET352726	8-TR105
ED330218	14-D301	ED415085J	19-D804	ER341493	4-FR108	ET352726	9-TR155
ED330218	14-D304	ED415085J	20-D851	ER341493	4-FR157	ET352726	18-TR702
ED330219	11-D181	ED511907	18-D701	ER341493	4-FR158	ET353897	19-TR801
ED330219	11-D182	ED511907	18-D702	ER355214	4-R105	ET353897	21-TR1
ED330219	11-D187	ED511907	18-D703	ER355214	4-R155	ET353897	21-TR3
ED330219	11-D188	ED511907	18-D704	ER368226	4-R114	ET353899	16-TR501
ED330219	14-D302	ED624903	14-D307	ER368226	4-R115	ET353899	16-TR503
ED330219	14-D303	ED624903	14-D308	ER368226	4-R164	ET353899	19-TR805
ED330219	14-D305	ED624903	14-D309	ER368226	4-R165	ET354365	19-TR802
ED330219	14-D306	ED624903	18-D707	ER375108	3-R10	ET354414	11-TR181
ED343410	5-D213	ED624903	19-D805	ER375108	3-R13	ET354414	11-TR184
ED343410	21-D6	ED624903	19-D806	ER375108	3-R60	ET354414	19-TR806
ED343854	3-D7	EF405396J	5-F4-A	ER375108	3-R63	ET354414	21-TR2
ED343854	3-D8	EF405396J	5-F5-A	ER378517J	3-R16	ET354414	21-TR7
ED343854	3-D9	EF405397J	5-F4-B	ER378517J	3-R21	ET354415	11-TR182
ED343854	3-D10	EF405397J	5-F5-B	ER378517J	3-R66	ET356336	21-TR8
ED344280	21-D1	EF405403J	17-F1	ER378517J	3-R71	ET360749	10-TR1
ED344280	21-D2	EF415131J	5-F2	ER381265J	4-R109	ET360749	10-TR2
ED344280	21-D3	EF415131J	5-F3	ER381265J	4-R159	ET360749	10-TR51
ED344280	21-D7	EH385788J	21-FL2	ER381266J	4-R117	ET360749	10-TR52
ED346525	21-D4	EH385978J	21-FL1	ER381266J	4-R167	ET368047	3-TR2
ED346525	21-D5	EI330352	12-IC201	ER383007J	4-R110	ET368047	3-TR6
ED346530	12-D201	EI348785	14-IC302	ER383007J	4-R111	ET368047	3-TR7
ED346530	18-D709	EI354080	4-IC101	ER383007J	4-R112	ET368047	3-TR8
ED346557	5-D211	EI360040J1	21-IC1	ER383007J	4-R113	ET368047	3-TR52
ED346567	3-D3	EI360043	10-IC1	ER383007J	4-R160	ET368047	3-TR56
ED346567	3-D4	EI362587J1	21-IC5	ER383007J	4-R161	ET368047	3-TR57
ED346567	3-D53	EI362587J1	21-IC6	ER383007J	4-R162	ET368047	3-TR58
ED346567	3-D54	EI382875J	19-X801	ER383007J	4-R163	ET368047	4-TR101
ED346567	4-D114	EI390063J	21-IC2	ER400150J	4-R116	ET368047	4-TR102
ED346567	5-D218	EI393323J	14-IC301	ER400150J	4-R166	ET368047	4-TR151
ED346567	5-D219	EI393326J	3-IC1	ER401039J	12-FR201	ET368047	4-TR152
ED346567	11-D183	EI403437J	21-IC3	ER415143J	5-R208	ET368047	5-TR203
ED346567	11-D184	EI403530J	11-IC101	ER415149J	5-R201	ET368047	5-TR204
ED346570	4-D110	EI412415J	21-IC4	ER415149J	5-R202	ET368048	3-TR3
ED346570	4-D111	EI416800J	19-IC801	ER415150J	5-R212	ET368048	3-TR4
ED346570	4-D112	EJ329610	22-5	ER418459J	4-R181	ET368048	3-TR5

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
ET368048	3-TR10	SA384105J	22-14				
ET368048	3-TR53	SB415182M	22-10				
ET368048	3-TR54	SB415339J	22-29				
ET368048	3-TR55	SE373237J1	22-30				
ET368048	3-TR60	SE373256	22-31				
ET368048	4-TR103	SE410963M	22-28				
ET368048	4-TR113	SE415340M	22-25				
ET368048	4-TR153	SE415347M	22-24				
ET368048	5-TR201	SK402898J	22-12				
ET368048	5-TR202	SK415178M	22-16				
ET369248	19-TR803	SK415180M	22-17				
ET376880	5-TR207	SK415338M	22-11				
ET376880	18-TR701	SK415349J	22-18				
ET378524J	4-TR112	SM365756C	22-26				
ET378524J	4-TR116	SM368416B	22-27				
ET378524J	4-TR117	SP415336J	22-22-A				
ET378524J	4-TR118	SP415341M1	22-1-A				
ET378524J	4-TR119	SP415356J	22-22-B				
ET378524J	4-TR162	SP415365M1	22-1-B				
ET378524J	5-TR213	SP415469M1	22-19				
ET378524J	5-TR216	SZ407213J	22-13				
ET378524J	5-TR217	ZS304021	22-15				
ET378524J	5-TR220	ZS346742	22-7				
ET378524J	8-TR104	ZS358936	22-9				
ET378524J	9-TR154	ZS361450	22-36				
ET378524J	18-TR703	ZS371016	22-37				
ET378524J	18-TR704	ZS385394J	22-2				
ET394735J	11-TR101	ZS389961J	22-34				
ET394735J	11-TR102	ZS389964J	22-20				
ET394735J	11-TR103	ZS394412J	22-3				
ET394735J	11-TR104	ZS404225J	22-21				
ET394735J	11-TR105	ZW381273J	22-23				
ET394735J	11-TR108	ZW403334	22-35				
ET394735J	11-TR151	ZW410640J	22-8				
ET394735J	11-TR152	ZW698308	22-32				
ET394735J	11-TR153						
ET394735J	11-TR154						
ET394735J	11-TR155						
ET394735J	11-TR158						
ET397160J	14-TR309						
ET397160J	14-TR310						
ET397160J	16-TR502						
ET397160J	16-TR504						
ET397160J	19-TR804						
ET403432J	20-PH851						
ET403526J	8-TR106						
ET403526J	9-TR156						
ET403527J	5-TR212						
ET403527J	8-TR107						
ET403527J	9-TR157						
ET415051J	4-TR110						
ET415051J	4-TR111						
ET415051J	4-TR160						
ET415051J	4-TR161						
ET415053J	4-TR108						
ET415053J	4-TR109						
ET415053J	4-TR158						
ET415053J	4-TR159						
ET415140J	11-TR183						
ET415156J	5-TR205						
ET415158J	5-TR206						
EV401270J	14-VR301						
EV401270J	14-VR302						
EV416950J	14-VR303						
EV415032M	16-VR501-A						
EV415136J	12-SW201-A						
EV415139J	16-VR501-B						
EW408724M	22-4						
EZ371605	22-33						
EZ403425J	22-38						

ABBREVIATIONS (AMPLIFIER)

ABBREVIATION	EXPLANATION
A	Analog
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
COM	COMmon
D	Digital
D/A	Digital to Analog
DAC	Digital to Analog Converter
DAT	Digital Audio Tape recorder
DC	Direct Current
GND	GrouND
L	Left
LED	Light Emitting Diode
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
R	Right
REG	REGulator
REC	RECord
TR	TRansistor
SW	SWitch
V.AMP	Voltage AMPlifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder

AKAI ELECTRIC CO., LTD.

12-14, 2-Chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan
SERVICE DEPARTMENT TEL:Tokyo (3745)9884 TELEX:J26261
Printed No. 930409-A1-1200 Printed Date July 10, 1993
350 Printed in Japan

AKAI

MODEL AM-59
MODEL AM-69

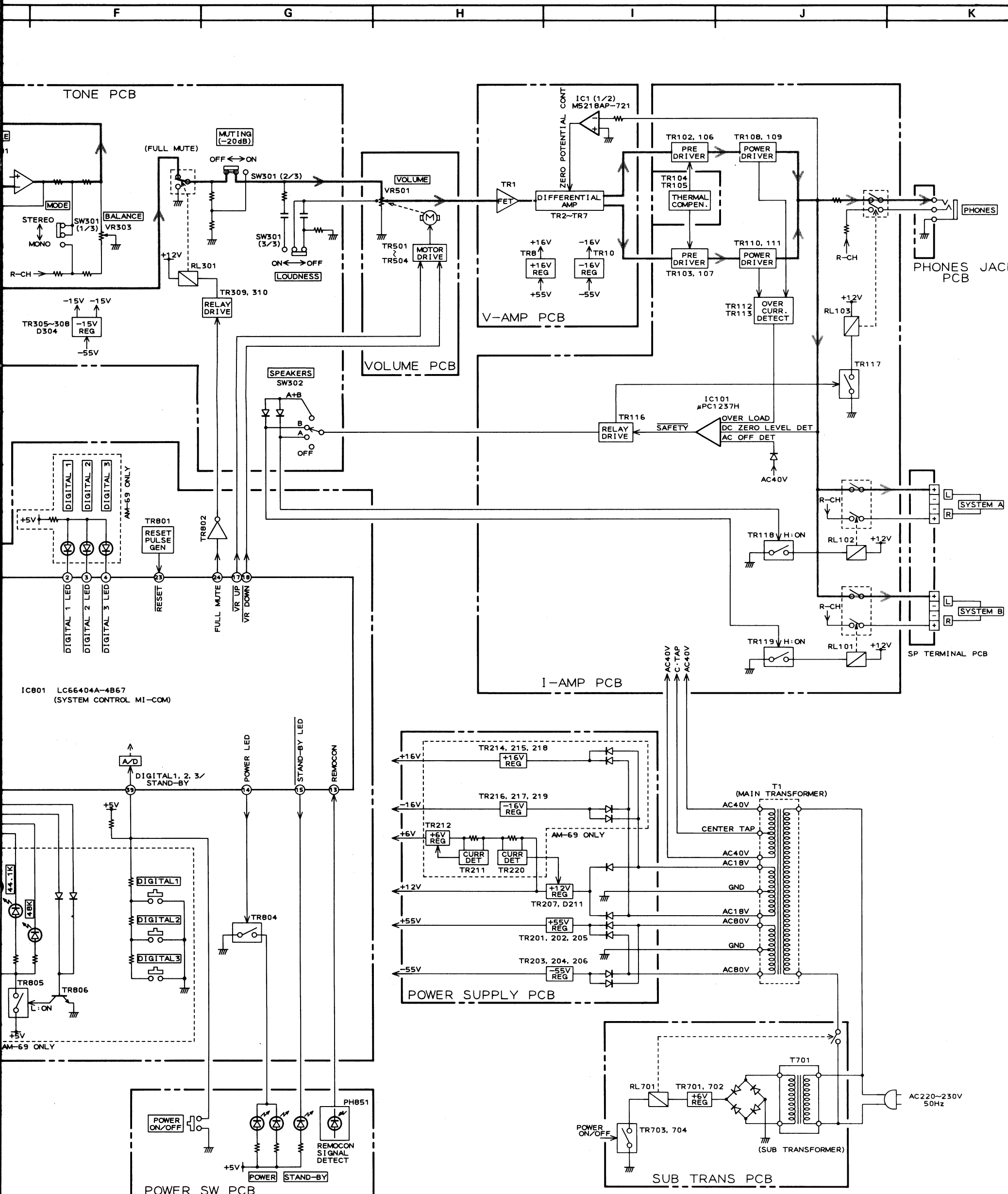
SCHEMATIC DIAGRAMS AND PC BOARDS

TABLE OF CONTENTS

1. BLOCK DIAGRAM 3
2. CONNECTION DIAGRAM 4
3. TONE AND OTHER PC BOARDS 5
4. SYSCON AND OTHER PC BOARDS 6
5. PRE AMP & SYSCON SCHEMATIC DIAGRAM 7
6. POWER AMP SCHEMATIC DIAGRAM 8
7. V- AMP AND OTHER PC BOARDS 9
8. POWER SUPPLY SCHEMATIC DIAGRAM 10
9. POWER SUPPLY AND OTHER PC BOARDS 11
10. DAC SCHEMATIC DIAGRAM 12
11. DAC PC BOARD 13
12. INFORMATION OF ICs 14

Use these schematic diagrams and PC boards together with the provided service manual.

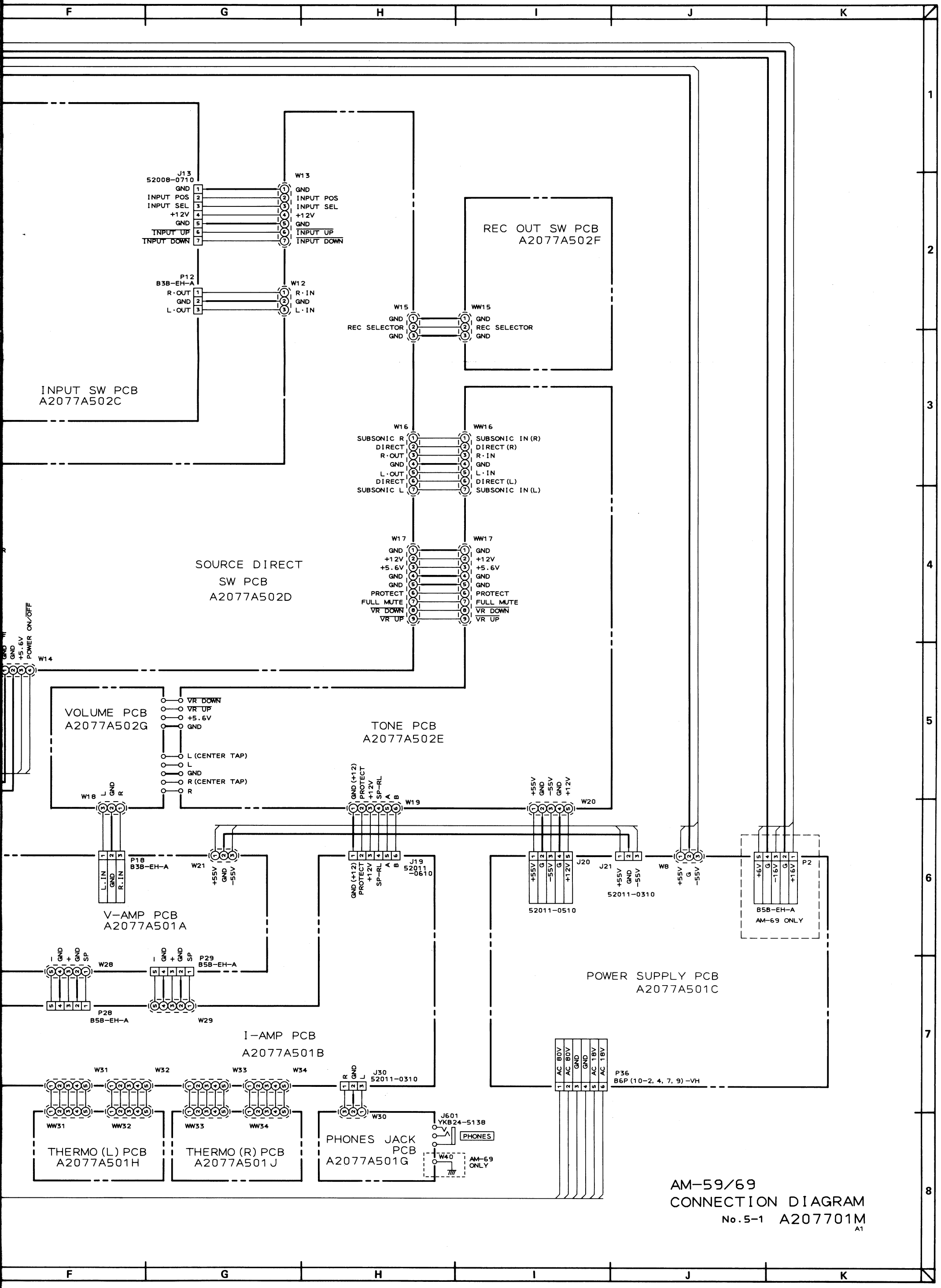
INPUT PCB
TR1, 2
DIFFERENTIAL AMP
IC1 M5220P (1/2)
PHONO
MC : ON
47K
100Ω
SW1 (1/4)
RIAA EQ
GAIN CONT
SW1 (2/4)
(IMPEDANCE CONT)
LINE
TUNER
CD
TAPE 1 IN
TAPE 2 IN
TAPE 3 IN
INPUT SELECTOR
AM-69 ONLY
D/A
LINE
TUNER
CD
PHONO
TAPE1
TAPE2
TAPE3
SW201 (1/4)
SW201 (2/4)
SW201 (3/4)
SW POSITION DETECT
ROTATION DETECT
MOTOR DRIVE
UP
DOWN
IC201 BA6109
INPUT SW PCB
SOURCE DIRECT
SUBSONIC
DIRECT
SW250
SOURCE DIRECT SW PCB
TONE PCB
BASS
TREBLE
VR302
VR301
NFB TYPE TONE CONT
MODE
STEREO
MONO
SW301 (1/3)
BALANCE
VR303
R-CH
(FULL MUTE)
+12V
RL
+15V +15V
TR301~304 D301
+15V REG
+55V
-15V -15V
TR305~308 D304
-15V REG
-55V
TAPE2
TAPE1
PHONO
OFF
CD
TUNER
LINE
DIGITAL
AM-69 ONLY
SW401
REC OUT SELECTOR
REC OUT SW PCB
DIGITAL 1
DIGITAL 2
DIGITAL 3
AM-69 ONLY
+5V
TR801
RESET PULSE GEN
DIGITAL 1 LED
DIGITAL 2 LED
DIGITAL 3 LED
RESET
INPUT DOWN
INPUT UP
REC SELECT
A/D
TR101
TR102
TR103
TR104
TR105
AM-69 ONLY
TR106//107
ON/OFF CONT
TR108, TR181 ~184
TAPE 1 OUT
TAPE 2 OUT
TAPE 3 OUT
JS4 AM-69 ONLY
JS6
AM-69 ONLY
TR803
REC MUTE
PHONO ON
A.SW CE
A.SW DATA
A.SW CLK
CE
DATA
CLK
IC101 LC7822N
(REC OUT SELECTOR)
REC SELECTOR PCB
INPUT POS
INPUT SELECT
IC801 LC66404A-4B67
(SYSTEM CONTROL MI-COM)
DAC POWER
EMPHASIS
MDT (MODE SET DATA)
MCK (MODE SET CLOCK)
MLE (MODE SET LATCH ENABLE)
ERR2 (2nd PLL UNLOCK OUTPUT)
S1 (INPUT SELECT1)
S2 (INPUT SELECT2)
48K
44.1K
32K
DIGITAL1, 2, 3 STAND-BY
SYSCON PCB
J4
OUT
J5
IN
DIGITAL1 (OPTICAL)
IC2 PD0037
IN1
DIGITAL2
DIGITAL3
IC1 (4/6, 1/6)
J3 TC74HCU04AP
WAVEFORM SHAPER
IC1 (6/6, 5/6)
IN2
IN3
COUNTER CLK IN
50Hz OSC
IC1 (2/6, 3/6)
(DIGITAL AUDIO INTERFACE RECEIVER)
S1
S2
EMPH
ERR2
48K
44.1K
32K
VCO2
BCK
DATA
LRCK
RESET
ERR1
IC3 SM5840AP
MDT
MCK
MLE
XT1
WCKO
BCK
DATA·L
DATA·R
BCK IN
DATA IN
LRCK IN
(8fs OVER SAMPLING DIGITAL FILTER)
DAC POWER ON/OFF
TR2, 3
ON/OFF CONT
TR5
5V REG
TR4
+6V
+16V
IC4 PCM69AP-J
SYS·CLK
WDCK
BCK
DATA·L
DATA·R
(D/A CONVERTER)
IC5 (1/2)
IC6 (1/2)
I→V & LPF
I·OUT·L
IC5 : NJM2114L
IC6 : M5238L
TR106
IC5 (2/2)
IC6 (2/2)
I·OUT·R
R-CH
TR6
TR1
RESET PULSE GEN
TR7, 8
MUTE DRIVE
DAC PCB
AM-69 ONLY
32K
44.1K
48K
TR805
TR806
L:ON
POWER ON/OFF
POWER

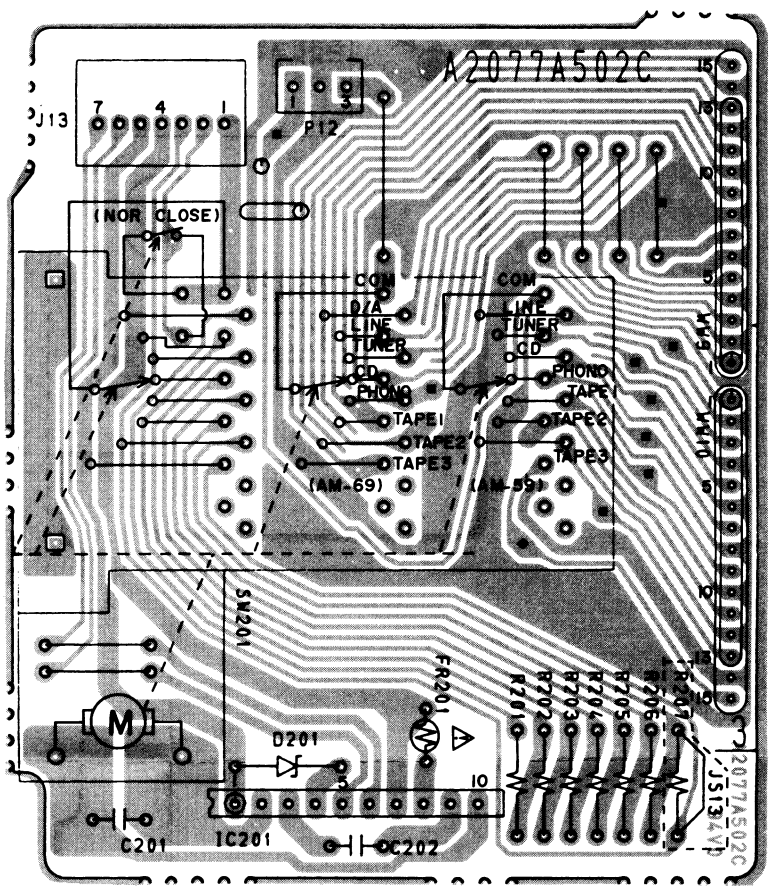


AM-59/69
BLOCK DIAGRAM
No. A207751M
A1

WARNING: ⚠ AND ▩ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▩, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


J13
52008-0710
GND 1
INPUT POS 2
INPUT SEL 3
+12V 4
GND 5
INPUT UP 6
INPUT DOWN 7
W13
GND
INPUT POS
INPUT SEL
+12V
GND
INPUT UP
INPUT DOWN
P12
B3B-EH-A
R·OUT 1
GND 2
L·OUT 3
W12
R·IN
GND
L·IN
INPUT SW PCB
A2077A502C
REC OUT SW PCB
A2077A502F
W15
GND
REC SELECTOR
GND
WW15
GND
REC SELECTOR
GND
W16
SUBSONIC R
DIRECT
R·OUT
GND
L·OUT
DIRECT
SUBSONIC L
WW16
SUBSONIC IN(R)
DIRECT(R)
R·IN
GND
L·IN
DIRECT(L)
SUBSONIC IN(L)
W17
GND
+12V
+5.6V
GND
GND
PROTECT
FULL MUTE
VR DOWN
VR UP
WW17
GND
+12V
+5.6V
GND
GND
PROTECT
FULL MUTE
VR DOWN
VR UP
SOURCE DIRECT
SW PCB
A2077A502D
GND
GND
+5.6V
POWER ON/OFF
W14
VOLUME PCB
A2077A502G
VR DOWN
VR UP
+5.6V
GND
L (CENTER TAP)
L
GND
R (CENTER TAP)
R
TONE PCB
A2077A502E
W18
L
GND
R
GND (+12)
PROTECT
+12V
SP-RL
A
B
W19
+55V
GND
-55V
GND
+12V
W20
P18
B3B-EH-A
L.IN
GND
R.IN
W21
+55V
GND
-55V
J19
52011
-0610
GND (+12)
PROTECT
+12V
SP-RL
A
B
J20
+55V
G
-55V
G
+12V
52011-0510
J21
+55V
GND
-55V
52011-0310
W8
+55V
G
-55V
P2
+6V
G
-16V
G
+16V
B5B-EH-A
AM-69 ONLY
V-AMP PCB
A2077A501A
I
GND
+
GND
SP
W28
P28
B5B-EH-A
P29
B5B-EH-A
W29
POWER SUPPLY PCB
A2077A501C
I-AMP PCB
A2077A501B
W31
W32
W33
W34
WW31
WW32
WW33
WW34
THERMO (L) PCB
A2077A501H
THERMO (R) PCB
A2077A501J
R
GND
L
J30
52011-0310
W30
PHONES JACK
PCB
A2077A501G
J601
YKB24-5138
PHONES
W40
AM-69
ONLY
AC 80V
AC 80V
GND
GND
AC 18V
AC 18V
P36
B6P (10-2, 4, 7, 9)-VH
AM-59/69
CONNECTION DIAGRAM
No.5-1 A207701M
A1



INPUT SW PCB A2077A502C

PRINCIPAL PARTS LOCATION

TRANSISTORs

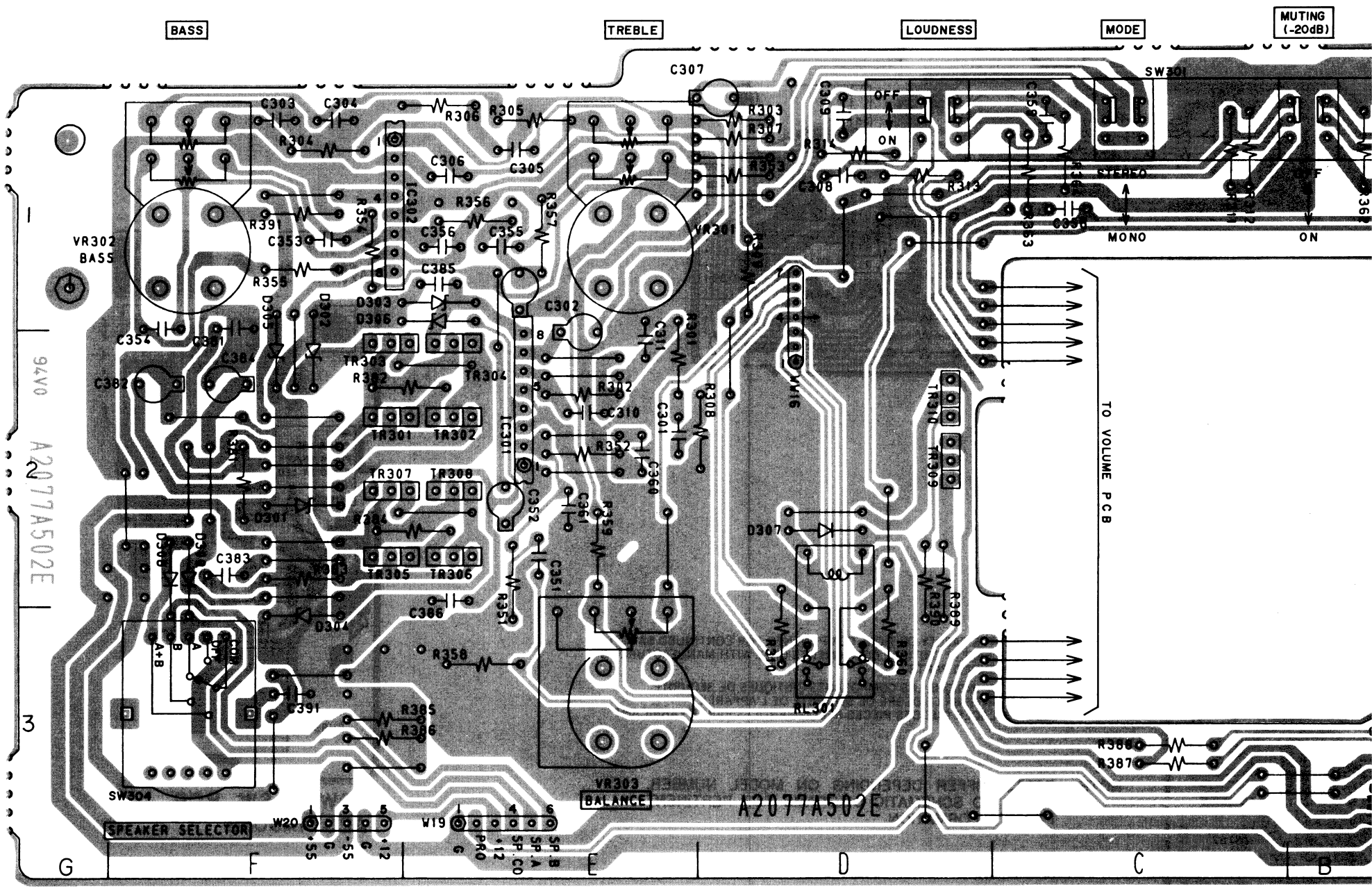
TR301	E,F2
TR302	E2
TR303	E,F2
TR304	E2
TR305	E,F2
TR306	E2
TR307	E,F2
TR308	E2
TR309	D2
TR310	D2

ICs

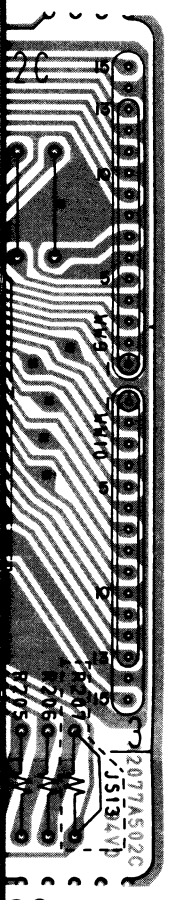
IC301	E2
IC302	E,F1

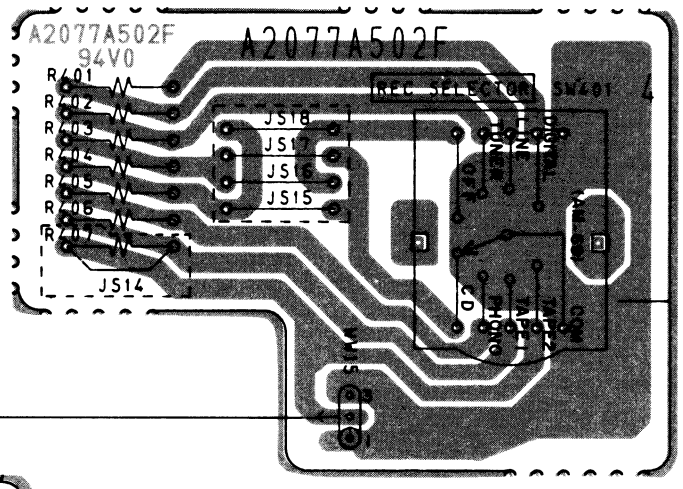
WIREs

W19	E3
W20	F3
WW16	D1,2
WW17	B3

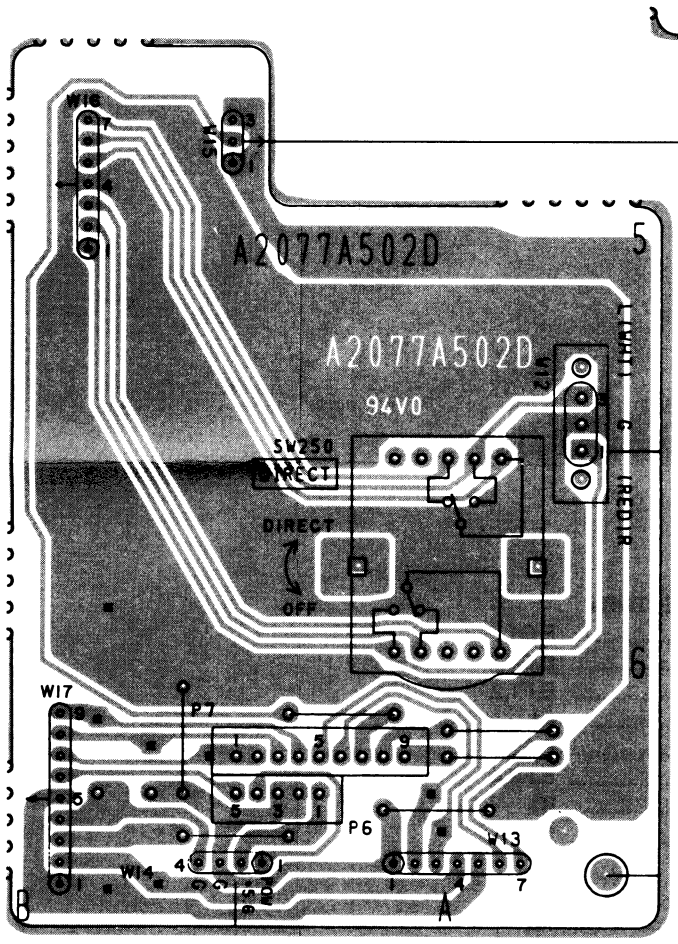


TONE PCB A2077A502E





REC OUT SW PCB
A2077A502F

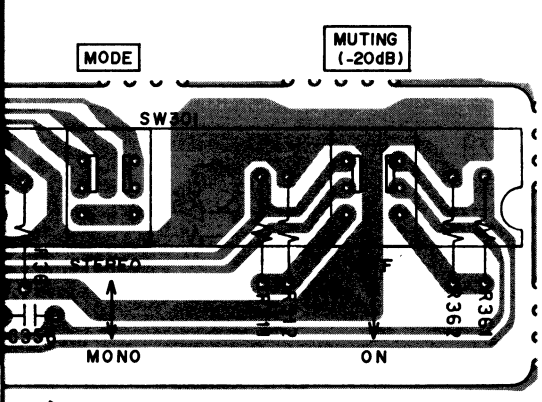


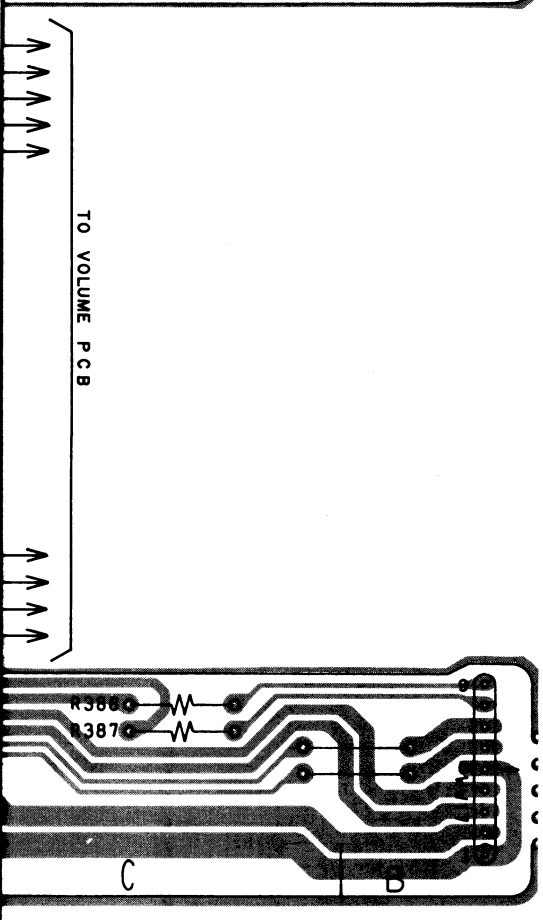
SOURCE DIRECT SW PCB
A2077A502D

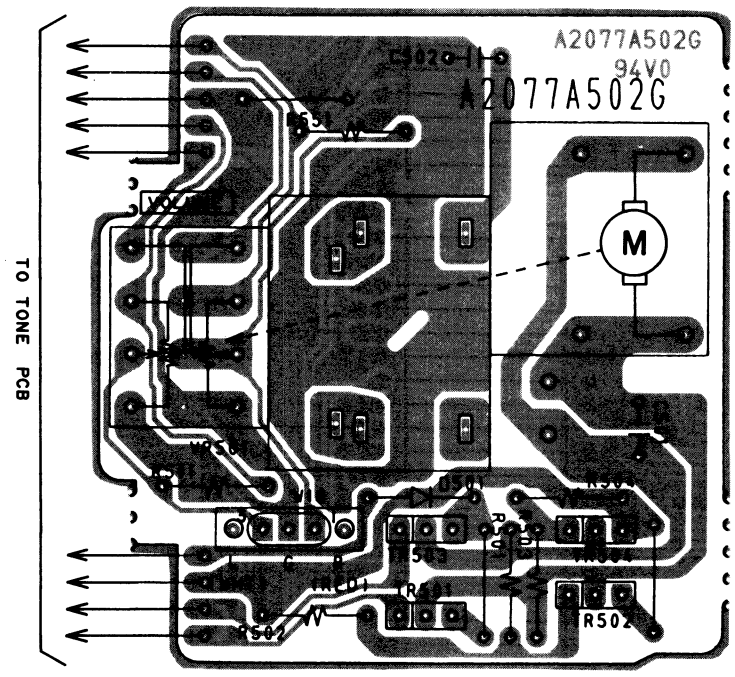
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.







VOLUME PCB
A2077A502G

PRINCIPAL PARTS LOCATION

TRANSISTORs

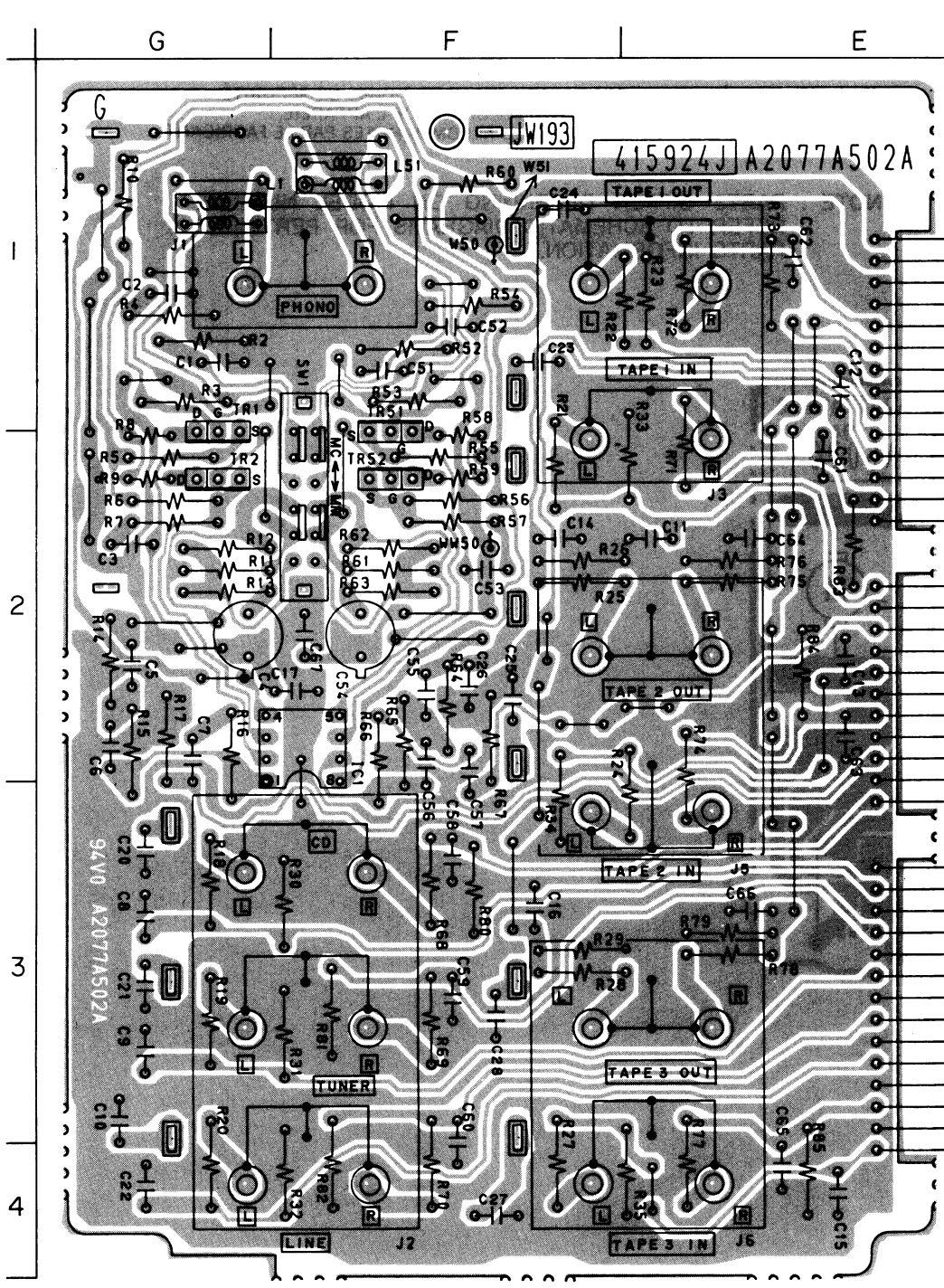
TR1	G1,2	TR153	C3
TR2	G2	TR154	C3
TR51	F1,2	TR155	C3
TR52	F2	TR156	C3
TR101	C2,3	TR157	C3
TR102	C2,3	TR158	C4
TR103	C2,3	TR181	A1
TR104	C2,3	TR182	A1
TR105	C2,3	TR183	A1
TR106	C2	TR184	A1
TR107	C2		
TR108	C2	**ICs**	
TR151	C3	IC1	F2
TR152	C3	IC101	C3

CONNECTORs

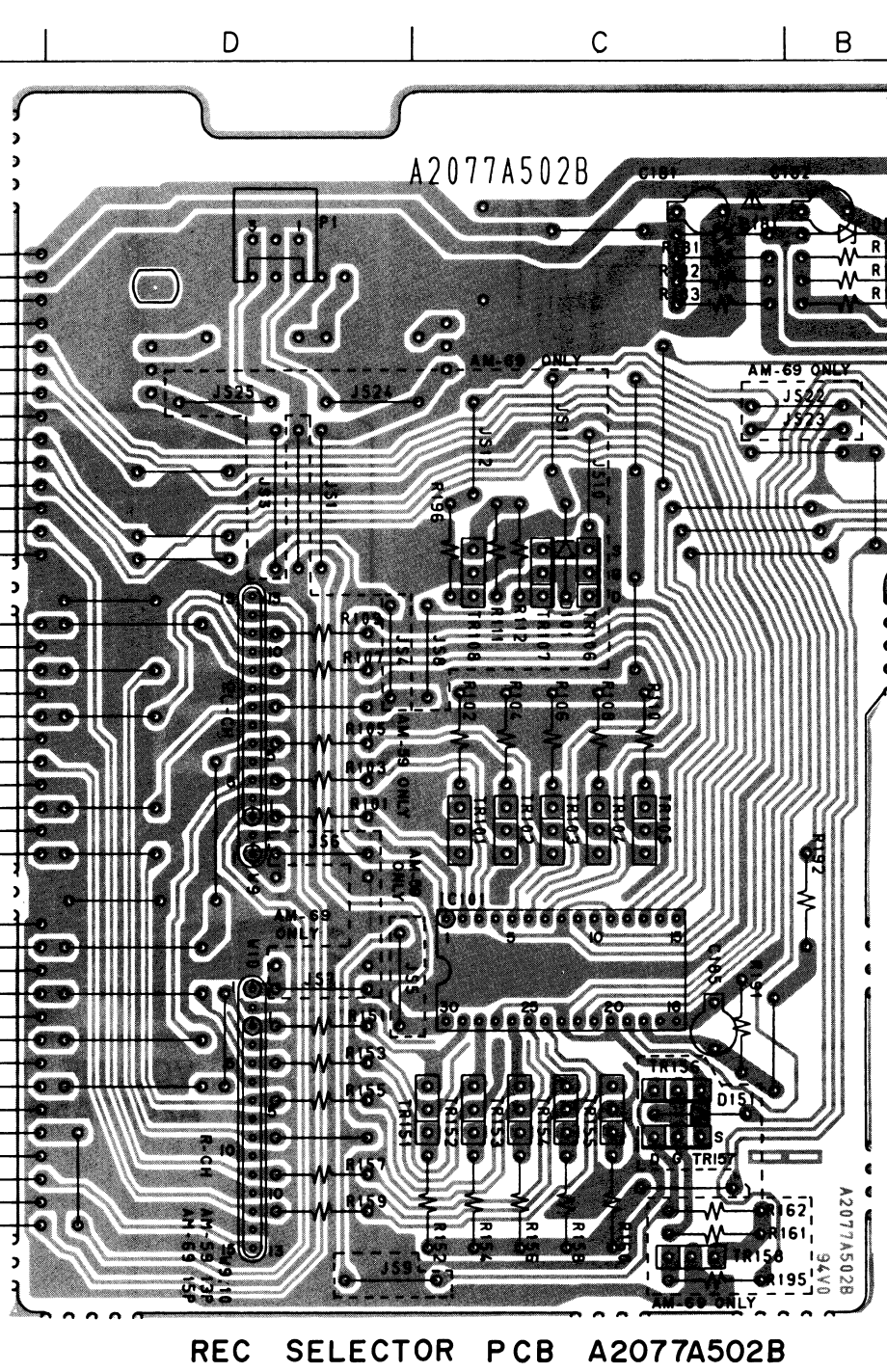
J1	F,G1
J2	E,G3,4
J3	E,F1,2
J4	A1
J5	E,F2,3
J6	E,F3,4
J8	B1
P1	D1

WIREs

W9	D2
W10	D3
W50	F1,2



INPUT PCB A2077A502A



REC SELECTOR PCB A2077A502B

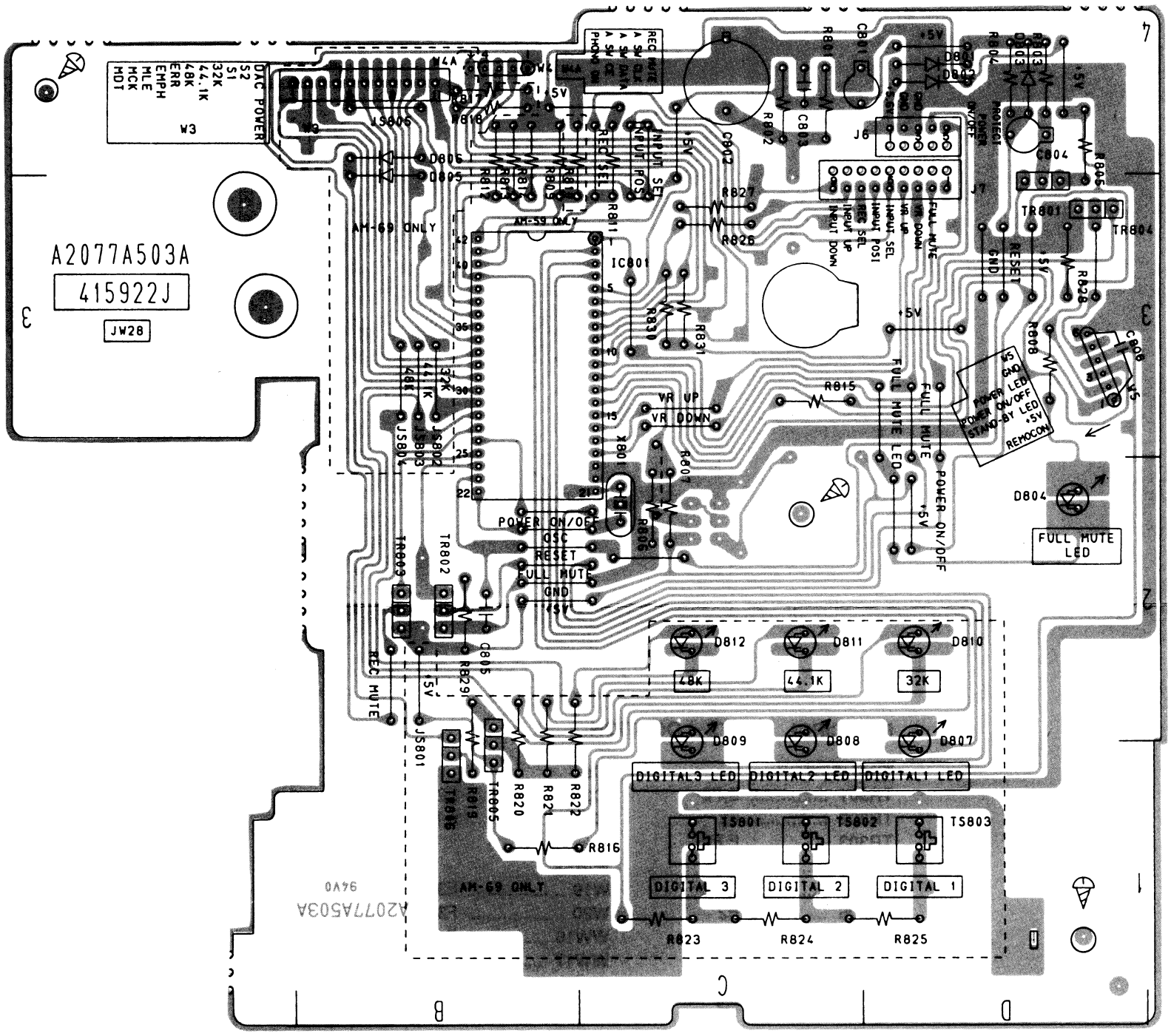
CHASSIS G

WARNING

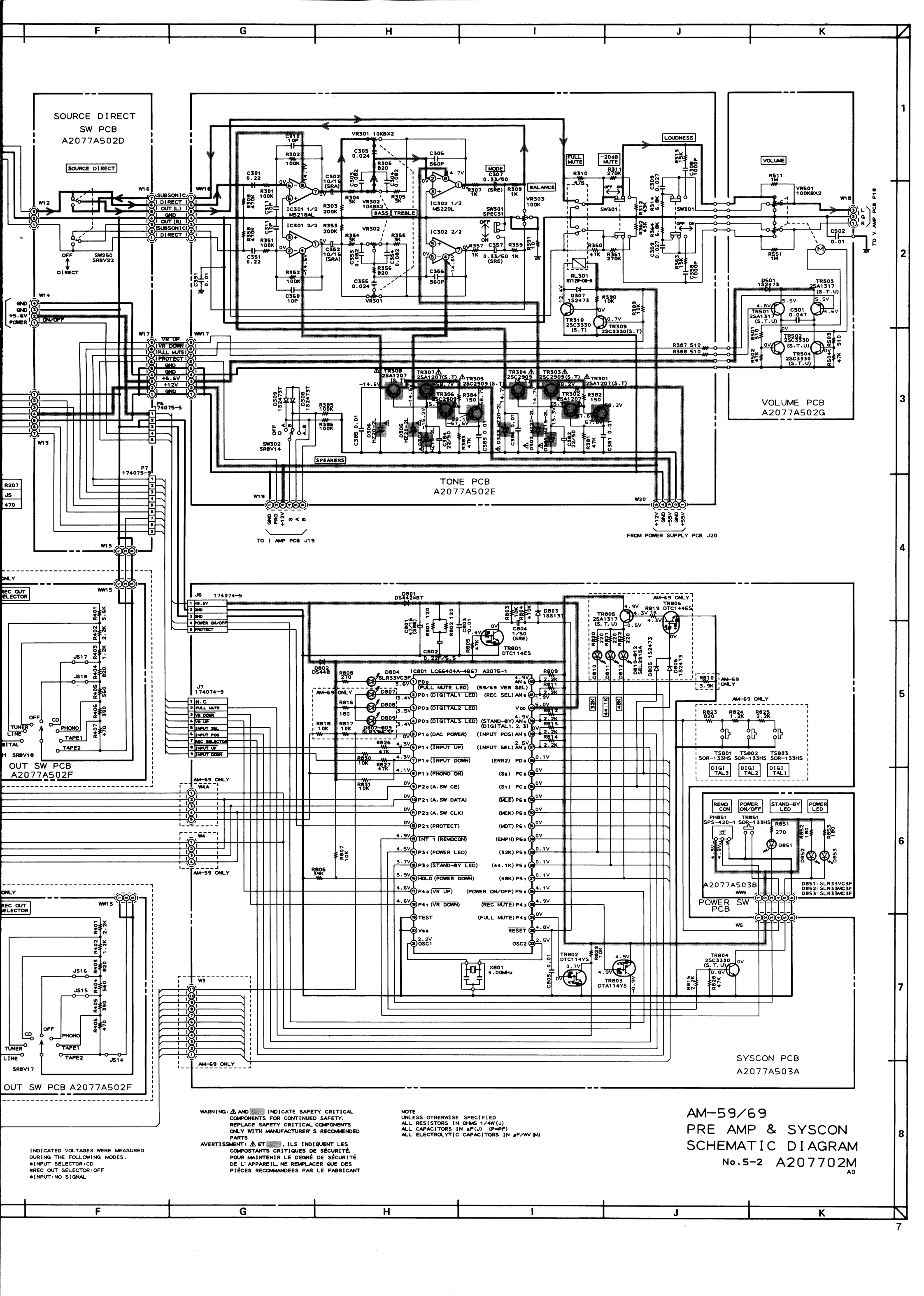
AVERTISS

NOTE :

6


A2077A503A
415922J
JW28
W3
DAC POWER
S2
S1
32K
44.1K
48K
EMPH
ERR
MLE
MCK
MDT
REC MUTE
CLK
DATA
PHONE SW
IC801
INPUT SEL
OUTPUT POS
REC SEL
AM-69 ONLY
VR UP
VR DOWN
FULL MUTE
FULL MUTE LED
POWER ON/OFF
OSC
RESET
GND
+5V
POWER LED
ON/OFF
STAND-BY LED
REMOCON
D804
D812
D811
D810
D809
D808
D807
DIGITAL3 LED
DIGITAL2 LED
DIGITAL1 LED
DIGITAL 3
DIGITAL 2
DIGITAL 1
TS801
TS802
TS803
R823
R824
R825
R816
TR801
TR804
TR802
TR803
TR805
TR806
J6
J7
J8
J4
J5
J801
C801
C802
C803
C804
C805
C808
C809
C811
R801
R802
R804
R805
R806
R807
R808
R809
R810
R811
R812
R813
R814
R815
R817
R818
R819
R820
R821
R822
R826
R827
R829
R830
R831
D801
D802
D803
D805
D806
D813
D814
D815
D816
D817
D818
D819
D820
D821
D822
D823
D824
D825
D826
D827
D828
D829
D830
D831
D832
D833
D834
D835
D836
D837
D838
D839
D840
D841
D842
D843
D844
D845
D846
D847
D848
D849
D850
D851
D852

INPUT SELECTOR
SW201 AM-69 SRBAA48
AM-59 SRBAA47
SOURCE DIRECT
SW PCB
A2077A502D
SOURCE DIRECT
OFF
DIRECT
SW250
SRBV22
FROM SUB TRANS PCB J14
GND
GND
+5.6V
POWER
ON/OFF
IC201 BA6109
INPUT SW PCB A2077A502C
J13
52008-0710
P12
B3B-EH-A
J8
52012-0310
+55V
GND
-55V
FROM POWER SUPPLY PCB W8
※
R201 R202 R203 R204 R205 R206 R207
AM-59 2.2K 1.2K 820 560 390 470 JS
AM-69 5.6K 2.2K 1.2K 820 560 390 470
PHONO
CD
TUNER
LINE
TAPE1
TAPE2
TAPE3
IN
OUT
INPUT PCB
A2077A502A
DAC PCB
A2078A5010
DIG1
DIG2
DIG3
FROM POWER SUPPLY PCB P2
REC SELECTOR PCB
A2077A502B
REC OUT SW PCB
A2077A502F
REC OUT SELECTOR
DIGITAL
SW401 SRBV18
SW401 SRBV17
REC OUT SW PCB A2077A502F
B (POWER SUPPLY) LINE
L-CH AUDIO SIGNAL LINE
INDICATED VOLTAGES WERE MEASURED
DURING THE FOLLOWING MODES.
*INPUT SELECTOR:CD
*REC OUT SELECTOR:OFF
*INPUT:NO SIGNAL



WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

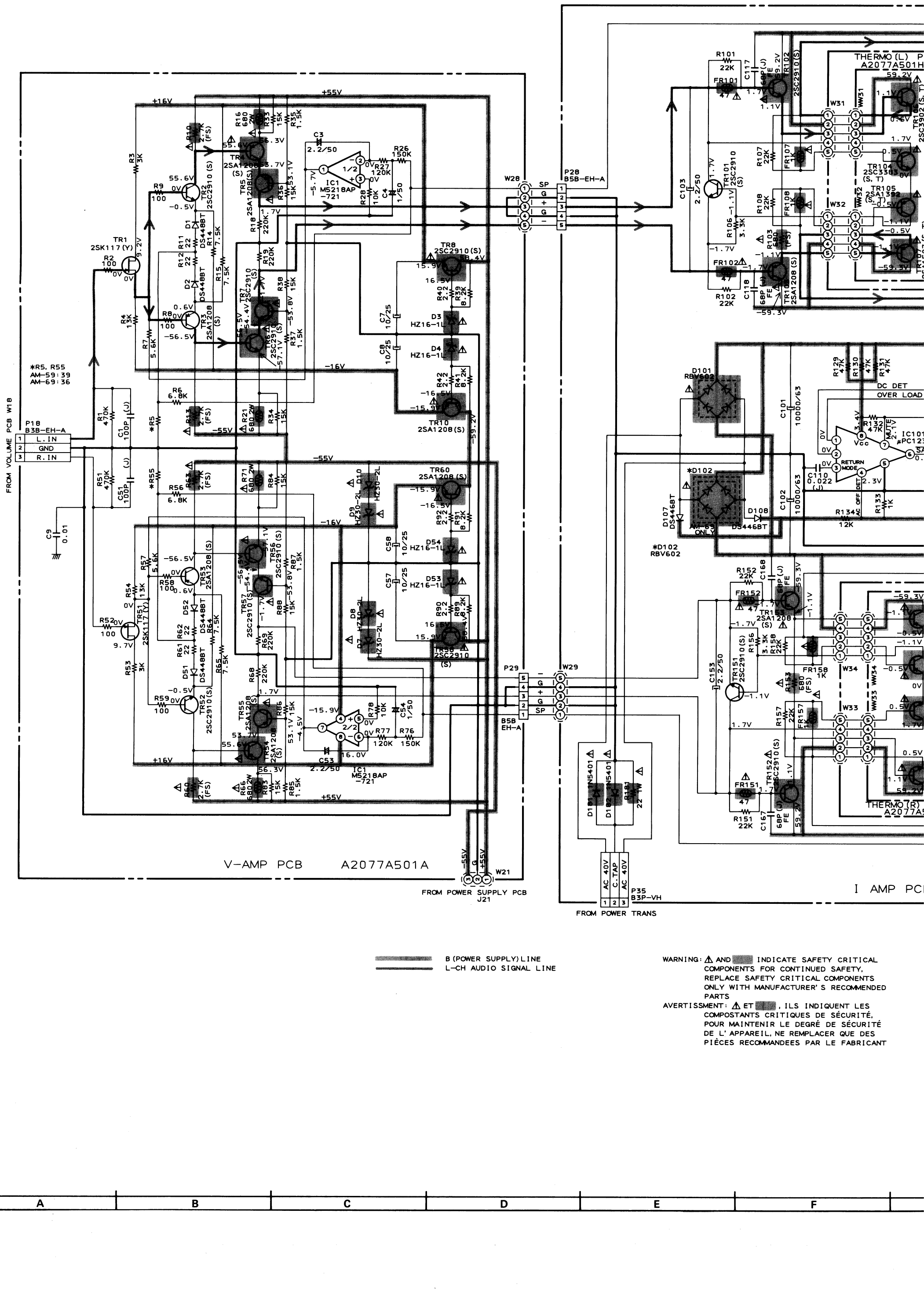
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF(J) (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)

INDICATED VOLTAGES WERE MEASURED DURING THE FOLLOWING MODES.
*INPUT SELECTOR:CD
*REC OUT SELECTOR:OFF
*INPUT:NO SIGNAL

AM-59/69 PRE AMP & SYSCON SCHEMATIC DIAGRAM

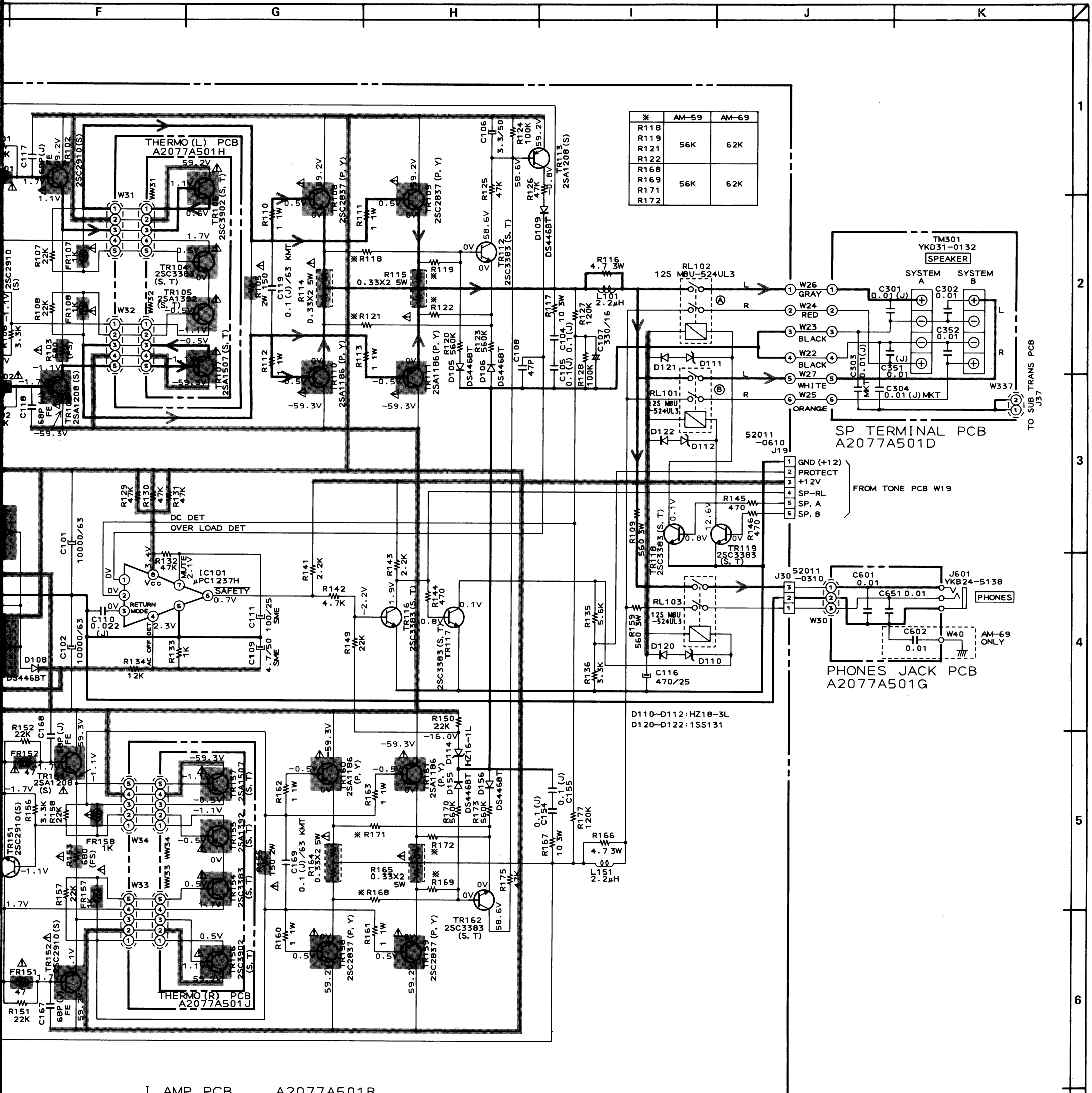
No.5-2 A207702M
A0



B (POWER SUPPLY) LINE
L-CH AUDIO SIGNAL LINE

WARNING: ⚠ AND ▒▒ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▒▒, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



※	AM-59	AM-69
R118 R119 R121 R122	56K	62K
R168 R169 R171 R172	56K	62K

D110~D112:HZ18-3L
D120~D122:1SS131

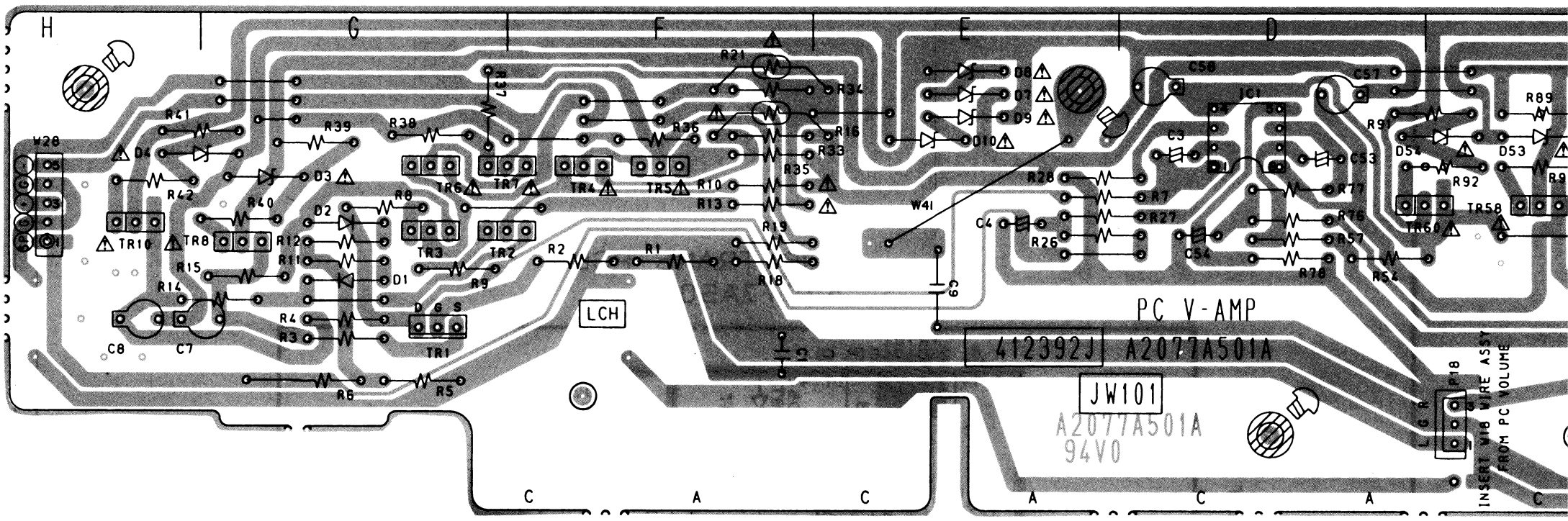
■ INDICATE SAFETY CRITICAL
NENTS FOR CONTINUED SAFETY,
CE SAFETY CRITICAL COMPONENTS
WITH MANUFACTURER' S RECOMMENDED

⚠ ET ■, ILS INDIQUENT LES
STANTS CRITIQUES DE SÉCURITÉ,
MAINTENIR LE DEGRÉ DE SÉCURITÉ
APPAREIL, NE REMPLACER QUE DES
S RECOMMANDEES PAR LE FABRICANT

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF (P=PF) 50WV
ALL ELECTROLYTIC CAPACITORS IN μF/WV(M) AS-1

AM-59/69
POWER AMP
SCHEMATIC DIAGRAM

No.5-3 A207703M
A1



V-AMP PCB A2077A501A

WARNING: ⚠ IND
REPLA
RECO

AVERTISSEMENT
POUR
NE RE

PRINCIPAL PARTS LOCATION

ICs

IC101	A2

CONNECTORs

J19	D2
J30	E2
P28	A2
P35	C2

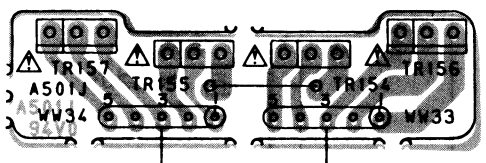
TRANSISTORs

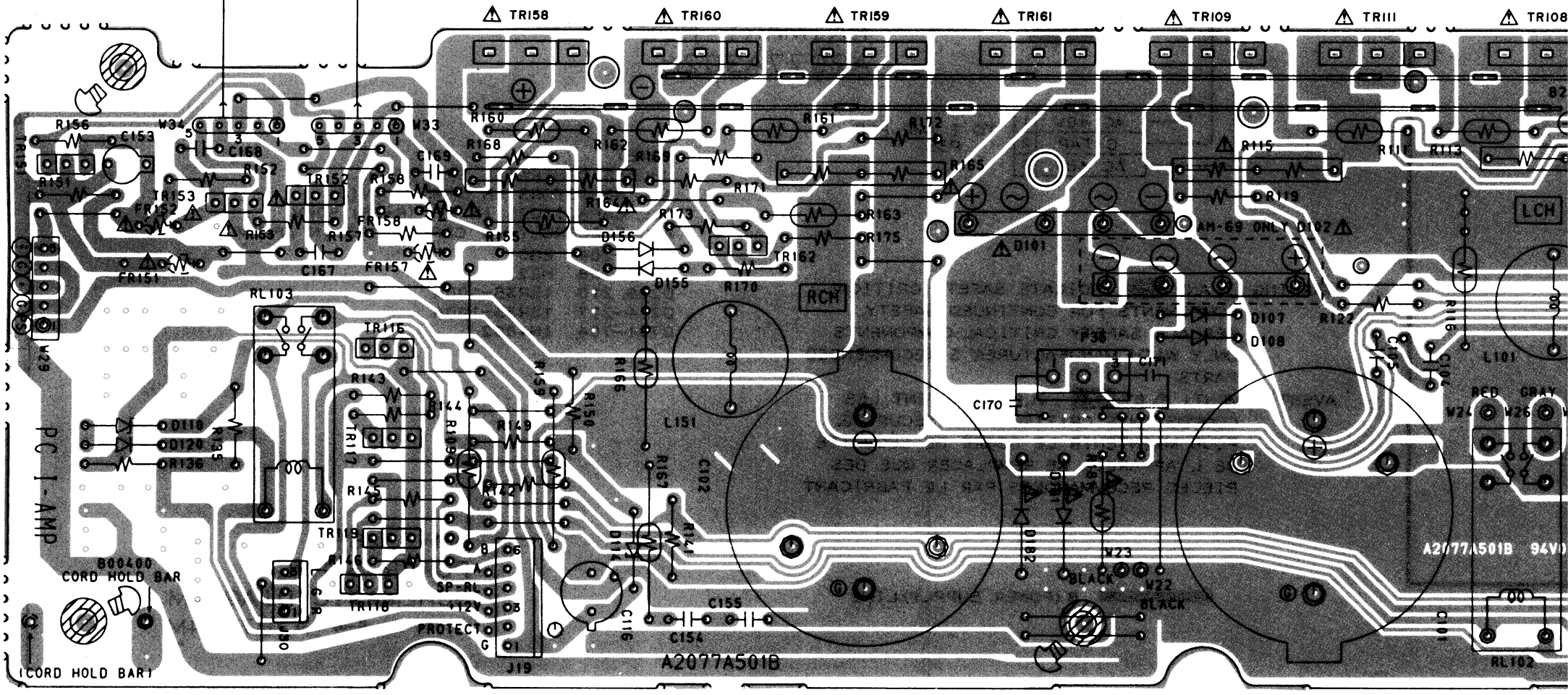
TR101	A2
TR102	A1
TR103	A1
TR108	B1
TR109	C1
TR110	B1
TR111	B1
TR112	A1
TR113	A2
TR116	E1,2
TR117	E2
TR118	E2
TR119	E2
TR151	E1
TR152	E1
TR153	E1
TR158	D1
TR159	C,D1
TR160	D1
TR161	C1
TR162	D1

WIREs

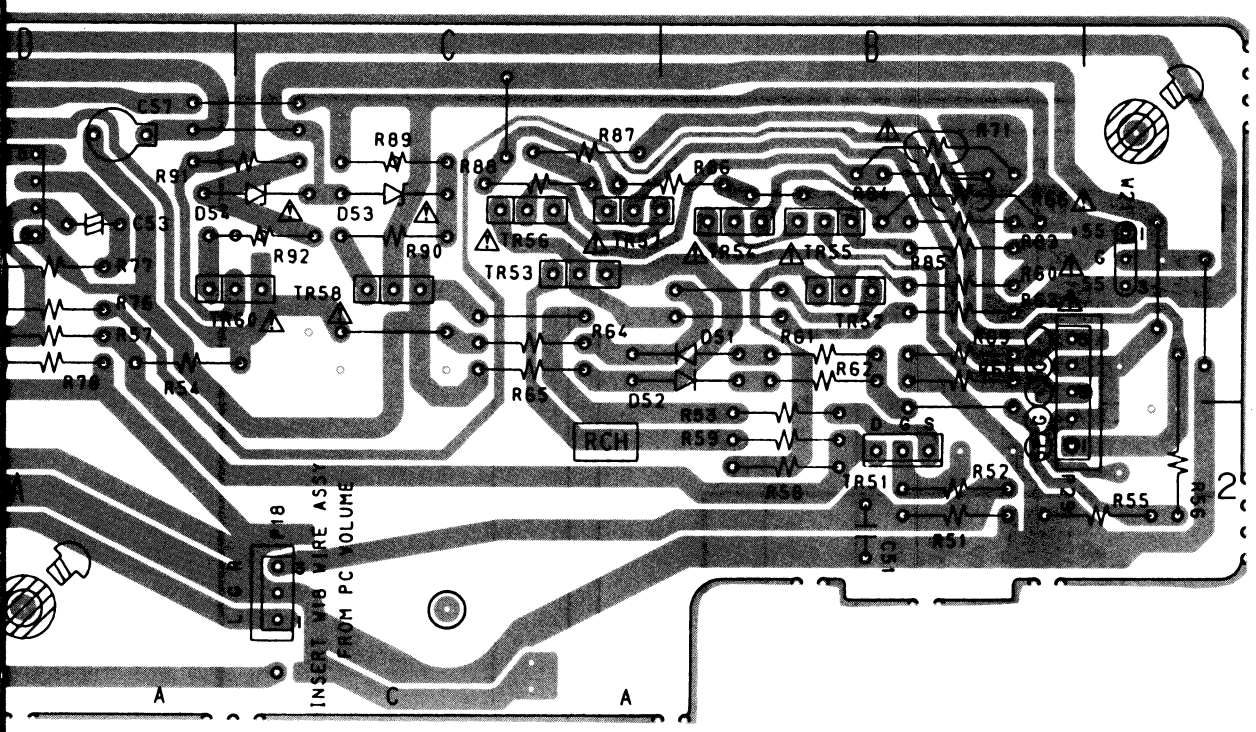
W22	C2
W23	C2
W24	B2
W25	B2
W26	B2
W27	B2
W29	E1
W31	A1
W32	A1
W33	E1
W34	E1
W37	A2

THERMO(R) P C B
A2077A501J





I- AMP PCB A2077A501B



PRINCIPAL PARTS LOCATION

CONNECTORs

P18	C2
P29	A,B1,2

WIREs

W21	A1
W28	H1

ICs

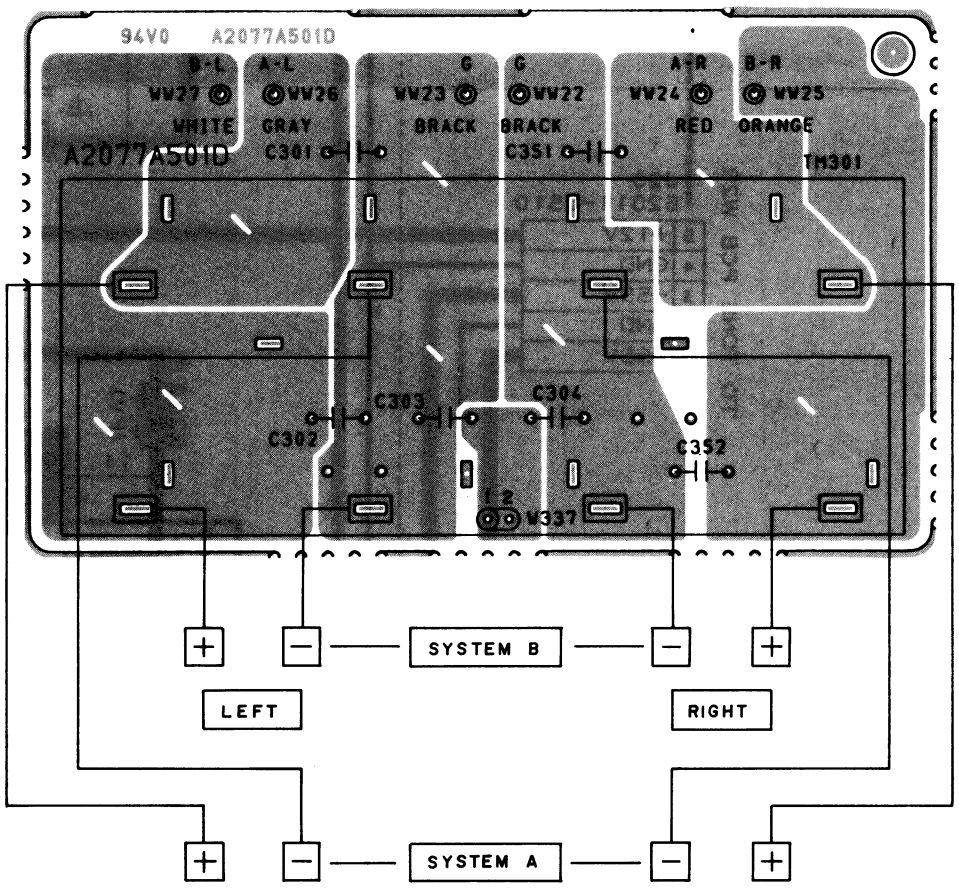
IC1	D1

TRANSISTORs

TR1	G2
TR2	F,G1
TR3	G1
TR4	F1
TR5	F1
TR6	G1
TR7	F,G1
TR8	G1
TR10	H1
TR51	B2
TR52	B1
TR53	C1
TR54	B1
TR55	B1
TR56	C1
TR57	C1
TR58	C1
TR60	C,D1

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

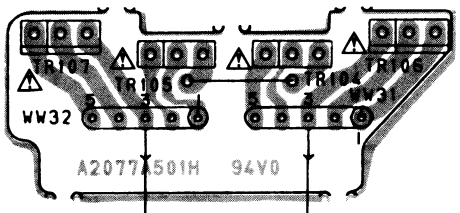


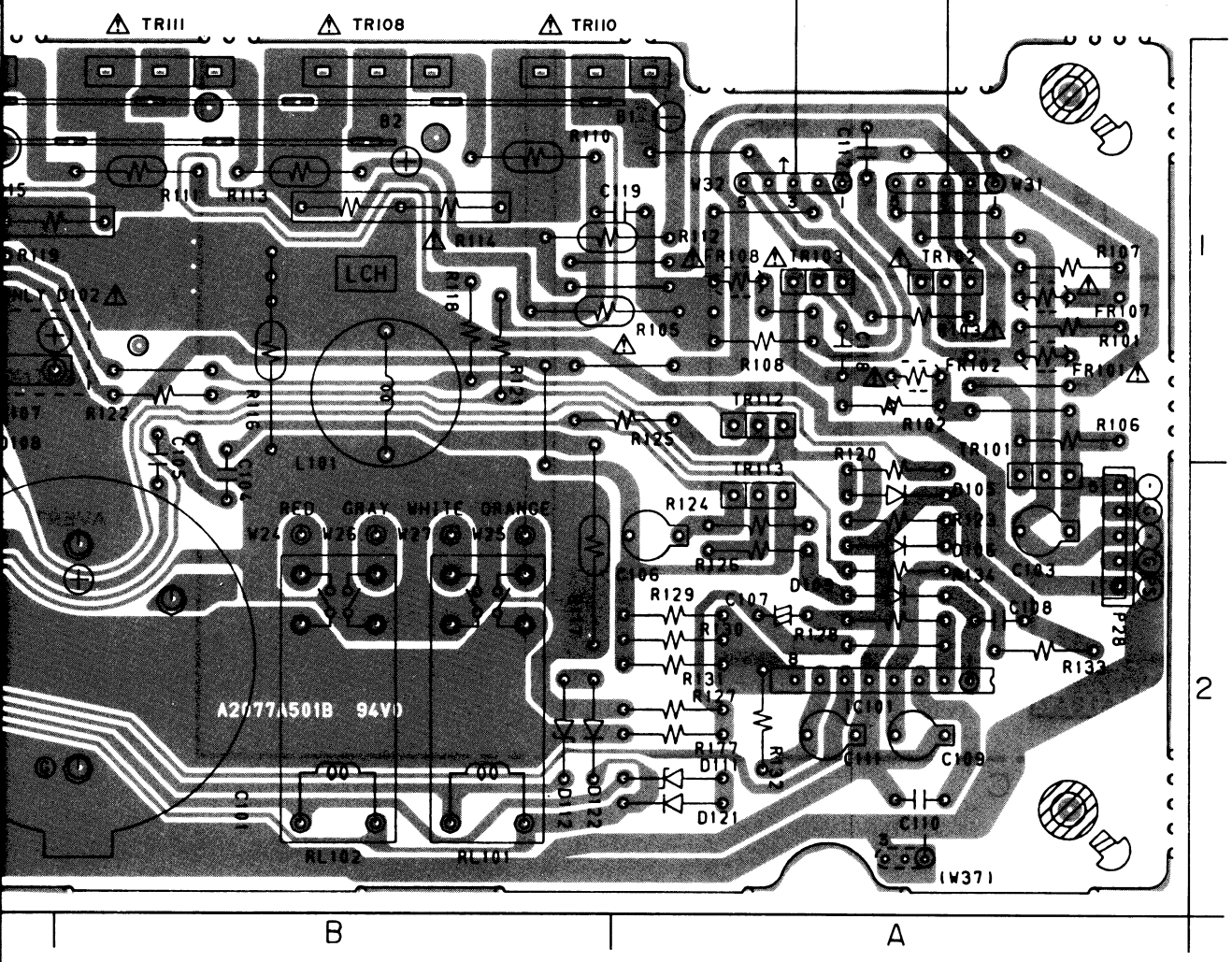
SP TERMINAL PCB A2077A501D

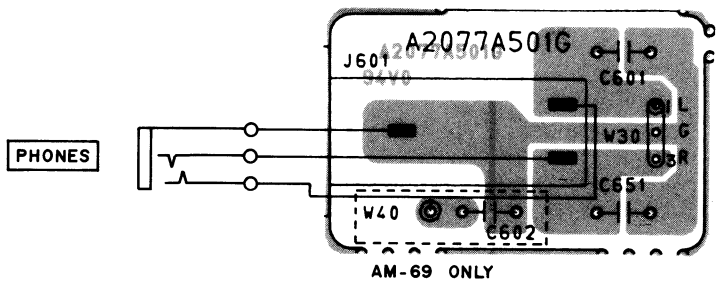
WIREs

W22	C2
W23	C2
W24	B2
W25	B2
W26	B2
W27	B2
W29	E1
W31	A1
W32	A1
W33	E1
W34	E1
W37	A2

THERMO(L) P C B
A2077A501H

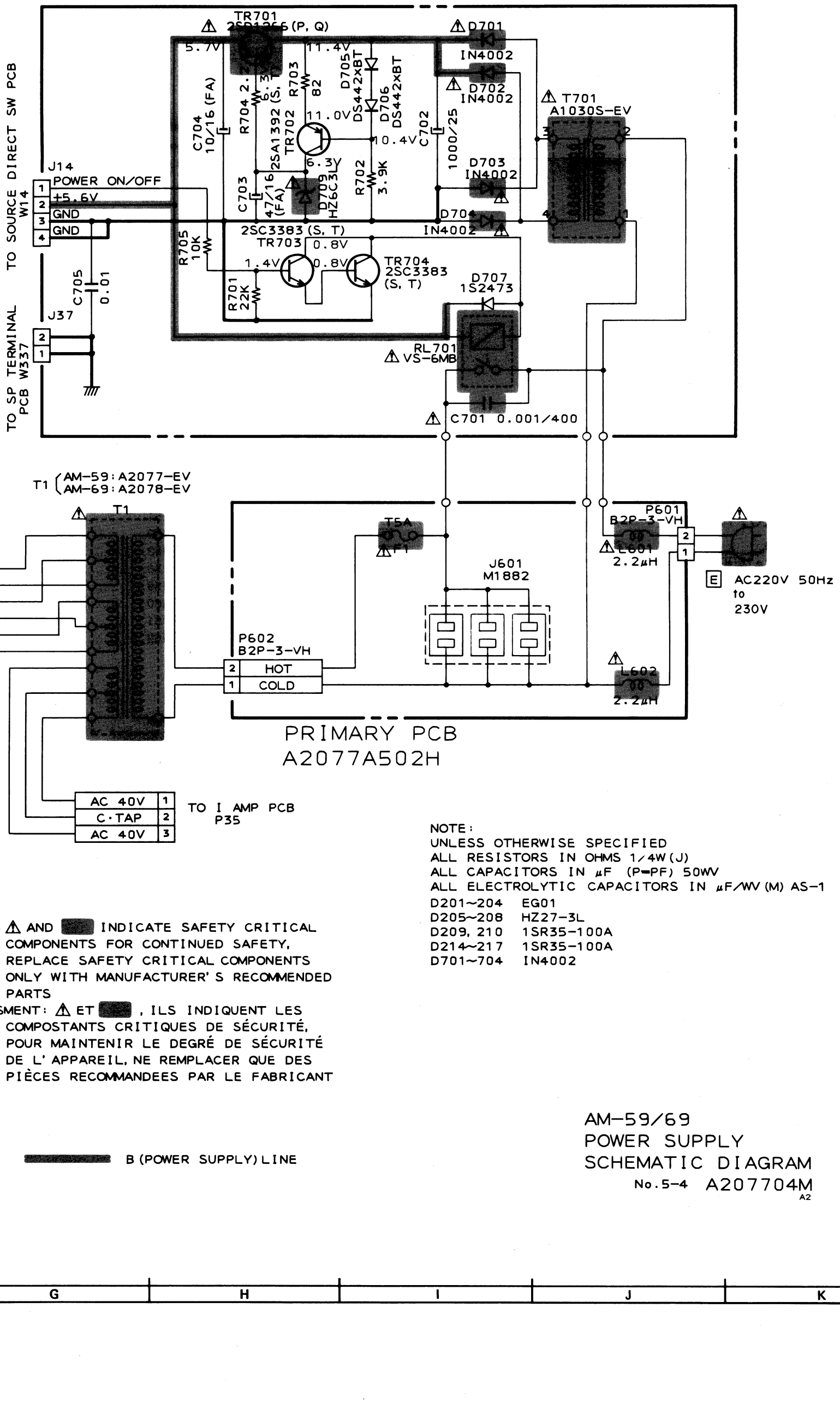






PHONES JACK PCB A2077A501G

TO DAC PCB W2
P2
B5B-EH-A
1 +16V
2 GND
3 −16V
4 GND
5 +6V
AM-69 ONLY
TO TONE PCB W20
J20
52011-0510
5 +12V
4 GND
3 −55V
2 GND
1 +55V
TO REC SELECTOR PCB J8
W8
+55V
GND
−55V
TO V AMP PCB W21
J21
52011-0310
1 +55V
2 GND
3 −55V
TR218 2SC3116 (S, T)
FR221 22 (G)
22.6V
D214
D215
R219 220 (FV)
16.4V
R215 82 (FV)
22.0V
TR214 2SA1392 (S, T)
TR215 2SA1392 (S, T)
1.4V
C213 10/25
C211 47/35
16.5V
D218 HZ18-1L
R217 8.2K
C217 470/63
D219 HZ18-1L
−16.7V
C214 10/25
TR217 2SC3383 (S, T)
28.3V
R218 8.2K
C212 47/35
R220 220 (FV)
−26.9V
TR216 2SC3383 (S, T)
D217
D216
FR222 22 (G)
−16.6V
R216 82 (FV)
16.0V
−27.5V
TR219 2SA1248 (S, T)
R222 3.9
TR207 2SD1266 (O, P)
23.0V
R212 4.7 (FV)
11.9V
12.6V
13.2V
R208 2.2 (FV)
R221 1.5K
R207 1.5K
TR212 2SA1507 (S, T)
11.9V
11.3V
6.0V
TR220 2SC3383 (S, T)
TR213 2SA1392 (S, T)
C207 330/25
D211 HZ12A3L
C208 3.3/50
C210 100/16
D213 HZ6A1L
R223 39 1W
6.0V
5.5V
R214 100
TR213 2SC3383 (S, T)
R213 10K
F4.F5
AM-59: T1A
AM-69: T1.25A
D210
D209
F5
F4
P36
AC 18V 6
AC 18V 5
GND 4
GND 3
AC 80V 2
AC 80V 1
AM-59 ONLY
JS201
TR205 2SC4793
58.4V
105.6V
105.6V
D201
D202
F3
F2
F2, F3 T315mA
59.0V
R201 150 (FV)
TR202 2SA1208 (S)
105.0V
58.9V
104.4V
TR201 2SA1208 (S)
C205 10/63
R205 10 (FV)
C203 100/63
D205
D206
R203 68K
C201 4.7/160
C215 47/160 (KME)
C206 10/63
C204 100/63
D207
D208
R204 68K
C202 4.7/160
C216 47/160 (KME)
−59.7V
R206 10 (FV)
TR204 2SC2910 (S)
−103.7V
TR203 2SC2910 (S)
D203
D204
R202 150 (FV)
−59.2V
TR206 2SA1837
−104.9V
−104.9V
WARNING
AVERTIS
POWER SUPPLY PCB A2077A501C



NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF (P=PF) 50WV
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M) AS-1

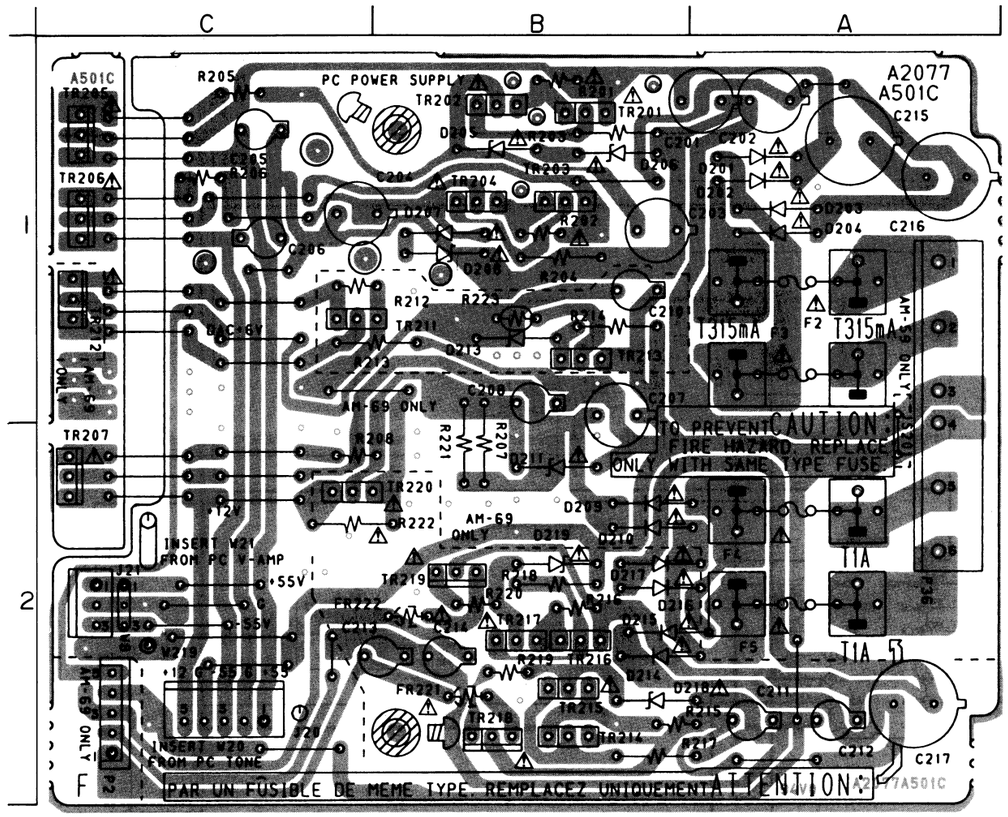
D201~204	EG01
D205~208	HZ27-3L
D209, 210	1SR35-100A
D214~217	1SR35-100A
D701~704	IN4002

WARNING: ⚠ AND [redacted] INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET [redacted] , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

[redacted] B (POWER SUPPLY) LINE

AM-59/69
POWER SUPPLY
SCHEMATIC DIAGRAM
No.5-4 A207704M
A2



POWER SUPPLY PCB A2077A501C

PRINCIPAL PARTS LOCATION

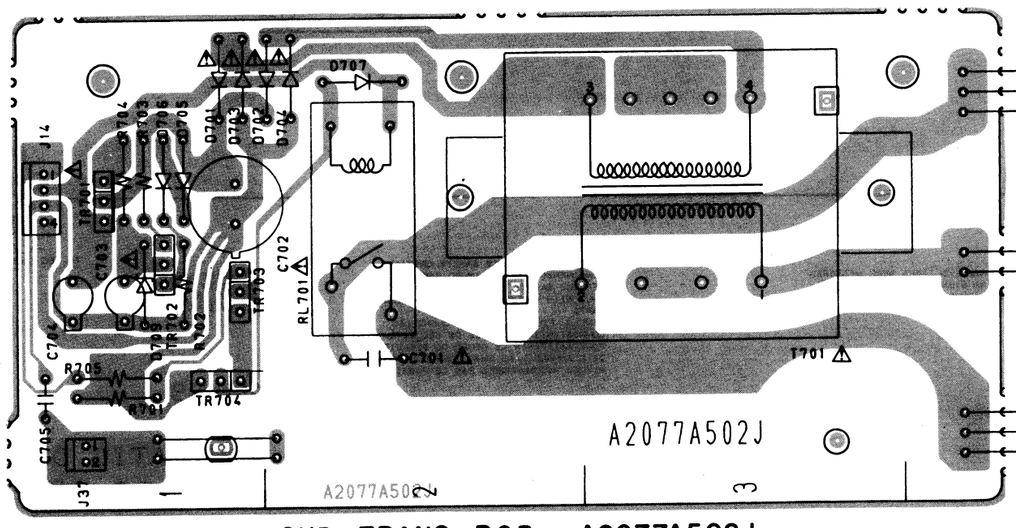
TRANSISTORs

TR201	B1	TR219	B2
TR202	B1	TR220	C2
TR203	B1		
TR204	B1	**FUSE RESISTORs**	
TR205	C1	FR221	B2
TR206	C1	FR222	B2
TR207	C2		
TR211	C1	**CONNECTORs**	
TR212	C1	J20	C2
TR213	B1	J21	C2
TR214	B2	P2	C2
TR215	B2	P36	A1,2
TR216	B2		
TR217	B2	**WIRE**	
TR218	B2	W8	C2

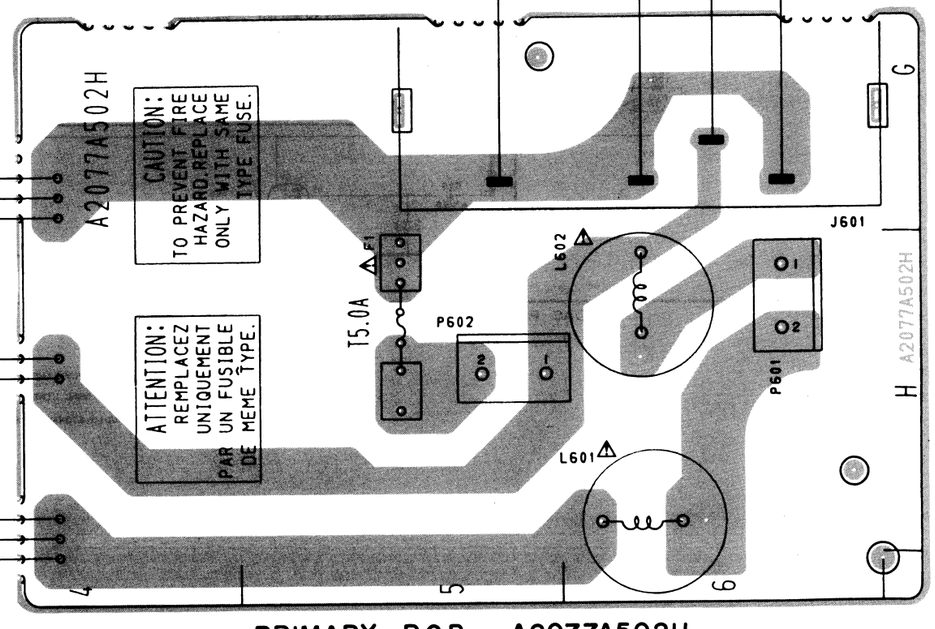
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.



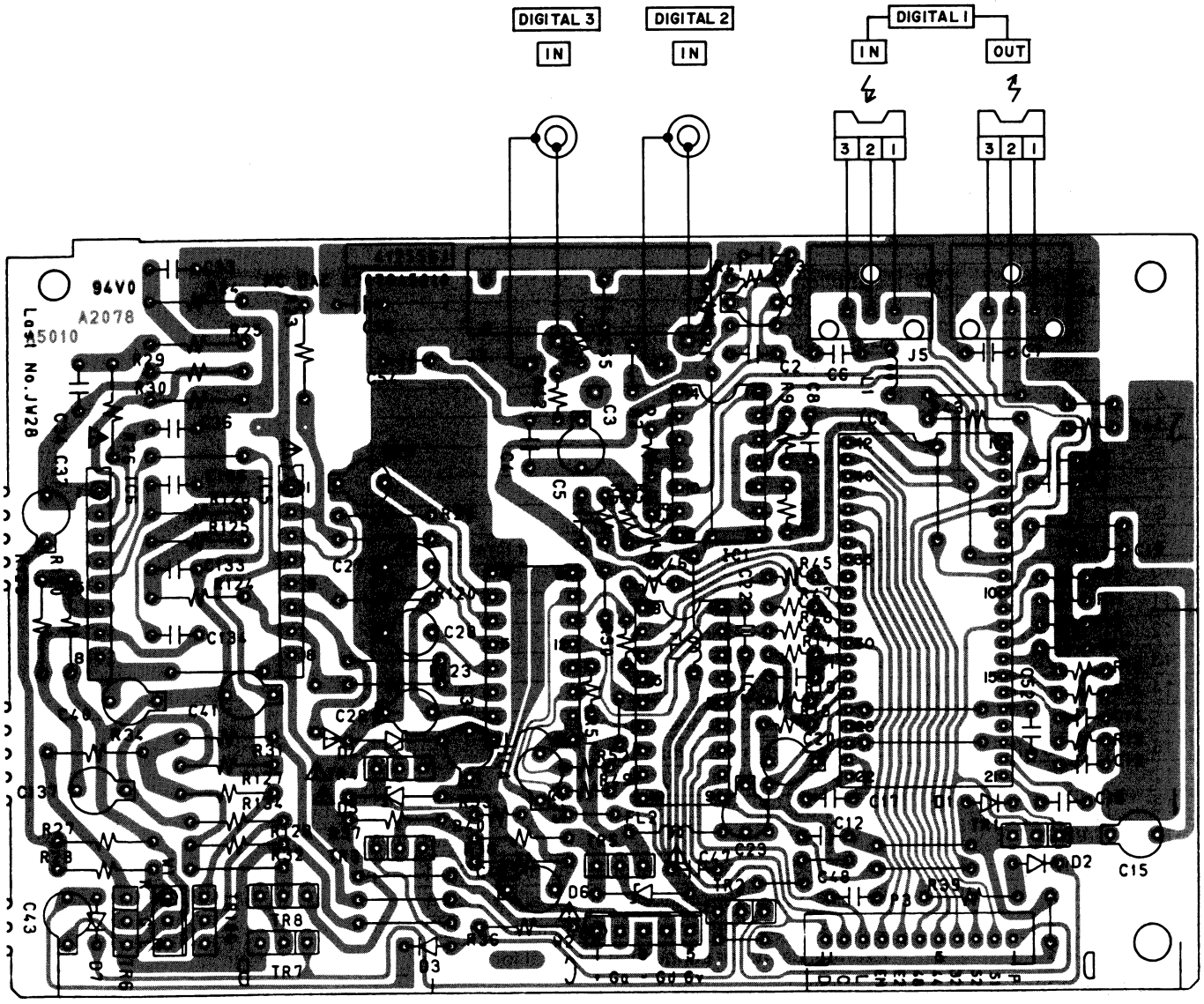
SUB TRANS PCB A2077A502J



PRIMARY PCB A2077A502H

AM-69
DAC
SCHEMATIC DIAGRAM

No.5-5 A207705M
A1

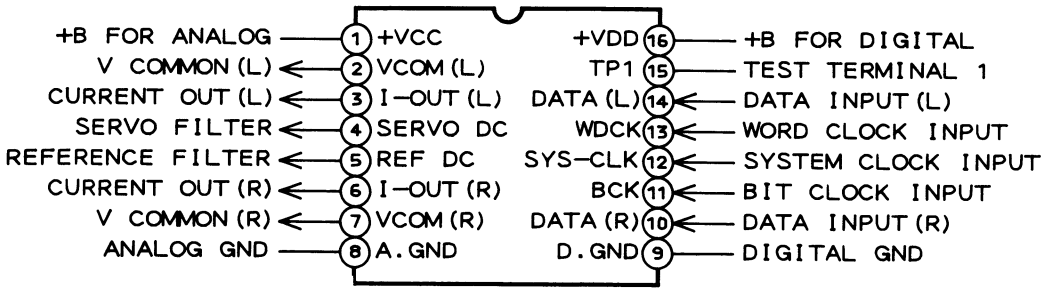


DAC PCB A2078A5010

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

PCM67AP-J (D/A CONVERTOR)



PD0037 (Digital Audio Interface Reciver)

Pin No.	Symbol	I/O	Function
1	IN1	I	Data input 1
2	IN2	I	Data input 2
3	IN3	I	Data input 3
4	S1	I	Input select 1
5	S2	I	Input select 2
6	OUT	O	Data MPX output
7	RXD	I	Data input
8	TEST	I	Test mode input
9	CNTR	I	Counter clock input for ERR 1,2 output time setting
10	INH2	I	VCO 2 ON / OFF control H: OFF
11	VSS	—	(0 V) GND
12	$\overline{\text{RESET}}$	I	Power ON reset input
13	PSVS	I	VCO 1,2 free-run frequency setting
14	PC1OUT	O	Phase comparator 1 output
15	R1	—	External resister connection terminal for VCO 1
16	VCO1 IN	I	Control voltage input for VCO 1
17	VDD1	—	(+B) Power supply for VCO 1
18	VCO1OUT	O	VCO 1 output (384fs)
19	VSS1	—	(0 V) GND
20	C1A	—	External capaciter connection terminal for VCO 1
21	C1B	—	External capaciter connection terminal for VCO 1
22	C2A	—	External capaciter connection terminal for VCO 2
23	C2B	—	External capaciter connection terminal for VCO 2
24	VSS2	—	(0 V) GND
25	VCO2OUT	O	VCO 2 output (384 fs)
26	VDD2	—	(+ B) Power supply for VCO 2
27	VCO2IN	I	Control voltage input for VCO 2
28	R2	—	External resister connection terminal for VCO 2
29	PC2OUT	O	Phase comparator 2 output
30	SIG2	I	Phase comparator 2 input
31	BCK	O	Bit clock output
32	DATA	O	Audio data output
33	LRCK	O	L ch / R ch select pulse out (H: L ch, L: R ch)
34	WCK	O	Word clock output
35	COPY	O	Copy data output (H: copy enable)
36	EMPH	O	H: Emphasis-ON
37	ERR2	O	2nd PLL loop unlock output (H: unlock)
38	ERR1	O	1st PLL loop data read out error output (H: error)
39	48K	O	Sampling frequency data output
40	44.1K	O	L: active
41	32K	O	
42	VDD	—	(+ B) Power supply for logic

SM5840AP (DIGITAL FILTER)